



**SCIENTIFIC, TECHNICAL AND ECONOMIC
COMMITTEE FOR FISHERIES (STECF)
OPINION BY WRITTEN PROCEDURE**

-

**Evaluation of the “Management Plans for
certain fisheries in the Mediterranean Sea”,
submitted by the French Authorities**

DECEMBER 2008, WRITTEN PROCEDURE

Edited by John Casey & Hendrik Dörner

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Introduction

STECF was requested to evaluate the “Management Plans for certain fisheries in the Mediterranean Sea”, submitted by the French Authorities (ANNEX A1). Due to the late submission of the proposed plans, STECF was unable to undertake its evaluation in Plenum, and the Commission therefore requested that an evaluation be undertaken by correspondence.

STECF, in line with point 7.1 of November 2007, point 6.4 of April 2008, point 10.1 of July 2008 and point 3.3.9 of November 2008 STECF Plenary sessions, is requested to review the French national management plans, to evaluate their findings, to make appropriate comments, also with respect to the elements/measures included in the management plan, and to advise whether the plan contains elements that account for the state of the exploited resources, if concerned fisheries are expected to exploit main target stocks in line with their production potentials and if the plan is expected to maintain or to revert fisheries productivity to higher levels and in which time frame.

STECF should also evaluate whether the justifications for possible derogations to the minimum distance are coherent with the technical conditions established in Article 13 (5), (9), (11) and, in particular, if are compatible with sustainable exploitation of exploited stocks, if there is no

significant impact on the marine environment and, finally, if the catches of species subject to the minimum size are minimal.

STECF response

Article 19 of Council Regulation (EC) No 1967/2006 indicates that Member States should notify their Management Plans to the Commission by September 2007.

STECF has previously evaluated a number of Management Plans proposed by Mediterranean MS (see STECF Plenary Report on November 2007, April 2008, July 2008 and November 2008), including previous proposals submitted by the French Authorities.

STECF OBSERVATIONS

The French “Management Plans for certain Fisheries in the Mediterranean” (ANNEX A1) consists of two parts: a description of the plans and a draft regulation for five different fishing gears (trawl fisheries, boat seine, beach seine, *gangui* = small bottom trawl and dredges). The operation of these different gear types equate to many different *métiers*, some of which are currently operating under existing derogations.

The proposed plans are not accompanied by appropriate scientific information relating to the target stocks and do not include conservation reference points or any economic impact assessment of the proposals.

Article 6 (2), (3) and (4) of Council Regulation (EC) No 2371/2002 specify that the management plans should include an expected timescale to achieve the objectives of the plans. While each of the plans includes a time frame, the objectives are not clearly stated and therefore it is unclear how the proposed time frames in the plans have been arrived at.

A more detailed commentary on the deficiencies of the draft French Management Plans with regard to conservation objectives is given in Annex A.

STECF notes that several of the fishing activities included in the Management plan submitted by the French Authorities have for many years, been taking place under specific derogations. As a result, appropriate data for all fisheries included in the Plans should already have been collected under the provisions of the DCR. However, such data are not presented with the proposed plan and there is not indication that they have been taken into account in preparing the plan.

STECF notes that most of the shortfalls in relation to the present Management Plans proposals are the same as those highlighted by STECF in its November 2007 evaluation of a previous proposal submitted by the French Authorities. STECF finds it surprising that the biological and fishery data collected under the provisions of the DCR NP have not been presented in support of the draft plan. Even the basic data on catch and effort levels are absent.

STECF CONCLUSIONS

Given the shortfalls in provision of appropriate data and criteria to evaluate the proposal submitted by the French Authorities, STECF concludes the following:

- There is insufficient information provided to assess whether the plans have taken into account the current state of the resources exploited.
- There is insufficient information provided to assess whether the fisheries concerned are expected to exploit the main target stocks in line with their production potentials.
- There is insufficient information provided to assess the economic impact of the proposed measures.

In addition, STECF notes that the proposed management plans largely reflect the *status quo* management for the fleets concerned. Given that some of the stocks for which an assessment is available, and which comprise the target for the fleets included in the proposed management plans, are fully exploited or overfished, maintaining the *status quo* is unlikely to result in a change to the exploitation rate on those stocks by the fleets concerned.

Given the lack of information of the extent of the impact that the practice of fishing with Gangui has on fragile *Posidonia* beds, STECF advises that a precautionary approach should be adopted. In order to afford maximum protection to this fragile habitat, STECF recommends that the practice of fishing with Gangui on fragile *Posidonia* beds should only be permitted if the impact on the habitat can be demonstrated to be negligible.

Finally, STECF concludes that the “Management Plans for certain Fisheries in the Mediterranean” submitted by the French Authorities (ANNEX A1) do not meet the requirements of Article 6 of Council Regulation (EC) No 2371/2002.

ANNEX A

French Management plans for certain fisheries in the Mediterranean Sea, submitted to the Commission in relation to the provisions of Council Regulation (EC) No 1967/2006:

Due to submission of inappropriate or inadequate data and information, STECF was unable to provide an objective evaluation of the management plans referred to above. Besides of the evaluations carried out on previous partial plans by France (see STECF Plenary reports on November 2007, point 7.1 and Annexes,), in an attempt to advise on the nature of the data and information required to undertake such an evaluation, STECF wishes to draw attention to the following specific deficiencies:

I) Management plan for the trawl fishery in the Mediterranean:

- No objective is defined in terms of targets to be achieved for the maintenance of stocks. Article 1 merely states that the objectives are as follows:
 - a) to regulate trawling activities in a rational and systematic manner;
 - b) to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity;
 - c) to take stock after three years and to propose appropriate ways of developing the present management plan.

It is not clear why three years is proposed as the appropriate time period under point c) above.

- The only management measures proposed are the prohibition of pair trawling and a prohibition on the use or storage on board of types fishing gears other than trawl nets (Article 3).
- The information on the fleet of trawlers (118 vessels, Annex 3 of the plan) is insufficiently detailed. It is not possible to differentiate between the two main segments (pelagic trawlers and bottom trawlers) and Article 4 does not provide any information on the number of licences to be issued or how this relates to the potential exploitation rate for the stocks concerned. Apparently, the plan is intended to apply to both bottom and pelagic trawls, but the *métiers* are not identified and defined. Based on the French request for derogation for bottom trawlers fishing for hake in the Gulf of Lions (GSA 7), which was evaluated by STECF in its November 2008 Plenary meeting, STECF notes that 114 bottom trawlers are involved in this fishery. There is also a need to determine how many bottom trawlers are active in Corsica (GSA 8) and in other areas outside the Gulf of Lions and how many pelagic trawlers are active in all areas.
- The target stocks are not adequately identified and no information on the status of such stocks is reported. According to first table in Annex 3 of the plan, it seems that sardines, anchovies, monkfish and sole are the target species of the two segments of the trawl fisheries. However, the French Authorities have requested a specific derogation for a bottom trawl fishery in the Gulf of Lion targeting the European hake (see STECF Plenary Report of November 2008), clearly indicating the relevance importance of this fishery even though it is not included in the comprehensive Plan. SAC/GFCM (and, partly, also STECF/SGMED-08-04) has undertaken assessments for sardine, anchovy and European hake in GSA 7. The results of the assessments indicate that present exploitation rate for sardine and anchovy may be unsustainable, while the European hake in GSA 7 is over fished and a reduction of fishing effort is required. It appears that the results of these assessments have not been taken into account in the proposed management plans.

- Article 5 of the Plan clearly states that biological information on catches and discards and assessment of abundance and biomass indices shall be derived from the data gathered through the DCR. Apparently this is a statement of future intent, but in fact collection of such data has been compulsory under the DCR since 2001. The data for the main target species should already be available according to Council Regulation. (EC) no. 1543/2000 and its subsequent amendments, by GSA and fleet segment, together with the analysis required.
- No reference points are specified
- The current level of fishing effort is not reported
- The proposals make no reference to other fisheries exploiting the same resources as the fleets referred to in the plans.
- There are no references to the restriction of the fishing activities in spawning and nursery areas and no reference is made regarding the minimum size regulation, apart from a specific request for a derogation (European hake) examined by STECF in the November Plenary 2008 (point 3.3.9 of the STECF Report)
- No data or studies about the economic importance of these fisheries are reported and no economic impacts of the management plans are included.

Most of the above points were made in the STECF evaluation of a previous French Management Plan and reported in the November 2007 STECF Plenary report. Evidently they have not been addressed in the preparation of the current plans.

II) Management plan for the boat seine fishery in the Mediterranean:

- No objective is defined in terms of targets to be achieved for the maintenance of stocks. Article 1 merely states that the objectives are the following:
 - a) to regulate boat seine fishing in a rational and systematic manner;
 - b) to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity;
 - c) to take stock after two years and to propose appropriate ways of developing the present management plan.

It is not clear why two years is proposed as the appropriate time period under point c) above. This fishery should be subject to a derogation from EC Council Regulation 1967/2006. The description of the various segments (*métiers*) concerned by the plans is incomplete and unclear. The information on the fleet of seiners (94 vessels) is insufficiently detailed (Annex 3 of the plan), and it is not possible to identify the three main segments (allatchara, lampara and seine). The length segments reported in the last part of Article 2 do not correspond to the information provided in the table in Annex 3 of the plan.
- Article 2 includes a list of 13 species of fish as target species for the “Allatchara”; nothing is available for the other gears, while Annex 3 reports also sardines, anchovies and bluefin tuna. STECF notes that some of the species listed in Article 2, do not usually live in coastal areas. The target stocks are not properly identified for all segments and no information on the status of such stocks is reported.
- The information in Article 3, on “Gear properties” is confusing. It is impossible to relate the information on vessel length and gear characteristics to specific gears. In addition, the technical information on “allatchara” is provided in annex 5.
- Article 4 provides a list of regulatory provisions, which only refer to specific fleet segments. The paragraph relating to the need for a derogation for small lampara purse-seine, small scale lampara and deep-sea lampara is confusing since Article 4 (1) of Reg. (EC) 1967/2006, states that “boat seining may be authorised in protected areas since the net does not touch the seagrass bed”. In the absence of any description of the fisheries concerned and

of any data on catches and discards, STECF is unable to assess the potential impact of such fisheries.

- STECF supposes that the data and analyses on the target species of the various segments concerned by this Plan should be already available in accordance with Council Regulation (EC) 1543/2000 and its subsequent amendments (or to the eventual derogation in existence). According to Article 8 of the proposed plan, it seems that the intention is to collect data in the future, while according to the provisions of the DCR such data should have been collected since 2001.
- Only a partial list of species is available in Annex 5 of the plans.
- No reference points are specified for any of the stocks or fisheries.
- The current level of fishing effort is not reported
- The proposals make no reference to other fisheries exploiting the same resources as the fleets referred to in the plans.
- There are no references to the restriction of the fishing activities in spawning and nursery areas and no reference is made regarding the minimum size regulation).
- Article 5 prescribes that fish caught below the minimum size shall be released alive into their environment of origin, but no data on the size composition of the catches for the various species are available.
- The second paragraph of Article 8 states that the Plan should be evaluated annually and amended if appropriate. Apart from an absence of objectives against which plan could be evaluated, this point is in clear contradiction with point c) of Article 1.
- Article 9 states that “for the coming year the creation of a licence should serve to limit the fishing effort by means of quota”. STECF notes that the fishing licences should already be in existence, that no data on fishing effort are provided, that the granting of a licence to fish does not determine the amount of fishing effort and that the only species presently subject to quota restrictions in the Mediterranean Sea is bluefin tuna.
- Article 9 of the plan also proposes a derogation from Articles 2 and 4 for three vessels over 18 m to fish within the 3-mile zone at a depth >25 m. Due to the absence of appropriate data, STECF is not in the position to assess for the likely consequences of the proposed derogation.
- No data or studies about the economic importance of these fisheries are reported and no economic impacts of the management plans are included.

Most of the above points were made in the STECF evaluation of a previous French Management Plan and reported in the November 2007 STECF Plenary Report. Evidently they have not been addressed in the preparation of the current plans.

III) Management plan for the beach seine fishery in the Mediterranean:

- No objective is defined in terms of targets to be achieved for the maintenance of stocks. Article 1 merely states that the objectives are as follows:
 - a) to regulate beach seine fishing in a rational and systematic manner;
 - b) to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity;
 - c) to take stock after three years and to propose appropriate ways of developing the present management plan.It is not clear why three years is proposed as the appropriate time period under point c) above.
- This fishery seems to be covered by a derogation, which is not reported. According to Article 2, the beach seine fishery “is authorised in conjunction with the practice of other *métiers*

- The fishing gear is technically defined as permitted only to vessels below 18 m, with a net length of a maximum of 450 m, with a maximum net high of 10 m and a minimum mesh size (opening) of 14 mm. A detailed description is included in annex 5
- The fleet composition and characteristics are not described and the overall number of vessels is not reported. No table for this gear is provided In Annex 3 of the Plans. The previously proposed plan (STECF Plenary November 2007) reported that the fleet will be defined in a next step although this has yet to be provided.
- According to Article 4, the management measures reported include the prohibition to use the beach seine on protected habitats, the permitted fishing period between 1 April to 30 November for a maximum of 150 days, the prohibition to use the motorised vessel to tow the net and the obligation to release alive undersize fish. However, the protected habitats are not identified and the ratio for all these provisions is not reported.
- A specific exemption is included in the plan for the “*poutine*” fishery (Article 6), which specifies a fishing period from 1 February to 31 May, different gear characteristics (200 m length and mesh size of 2 mm), smaller vessels (below 12 m) and the permit to catch juveniles of small pelagic species. No scientific information is available about this specific “*métier*” to permit an evaluation of the likely impact.
- The target stocks are not appropriately identified in annex 5 (some are grouped into categories difficult to attribute to species) and no information on the status of such stocks is reported in any part of the plan.
- No reference points are specified for any of the stocks or fisheries.
- The current fishing effort is not reported.
- The proposals make no reference to other fisheries exploiting the same resources as the fleets referred to in the plans.
- There are no references to the restriction of the fishing activities in spawning and nursery areas and no reference is made regarding the minimum size regulation.
- No data or studies about the economic importance of these fisheries are reported and no economic impacts of the management plans are included.

Most of the above points were made in the STECF evaluation of a previous French Management Plan and reported in the November 2007 STECF Plenary Report. Evidently they have not been addressed in the preparation of the current plans.

IV) Management plan for the “*ganguil*” (small bottom trawl) fishery in the Mediterranean:

- No objective is defined in terms of targets to be achieved for the maintenance of stocks. Article 1 merely states that the objectives are as follows:
 - a) to regulate a traditional activity in a rational and systematic manner, while ensuring that know-how is passed on;
 - b) to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity;
 - c) to take stock after one year and to propose appropriate ways of developing the present management plan.

It is not clear why three years is proposed as the appropriate time period under point c) above. Furthermore, Article 8 states that “two years will be required after the publication of the management plan for sufficient data to be gathered....”; this discrepancy should be clarified.

- According to Article 2, this fishing gear can be used only by vessels below 12 m, with an engine below 85 kW and with a maximum fishing speed of 2.5 knots. Fishery is reported to be carried out within the 3-mile zone and traditionally on *Posidonia oceanica* meadows. The

technical features of various types of “*ganguï*” are defined in the plan, as well as the fishing areas and periods. The management plan is applied in the area between the “*prud’homie*” of La Ciotat and the “*prud’homie*” of Cannes.

- According to the description (Article 3), this fishery includes at least three different *métier*. The information on the fleet is provided with a list of 56 vessels well identified, while the characteristics of the fleet are summarised in Annex 3 of the Plan. The number of vessels is different between the first list (56) and the fleet characterisation (68 vessels). The plan reports that the fleet will be defined in a next step, following the enforcement of the management plan. However, it seems illogical that the fleet is to be defined after the introduction of the Plan and not before.
- The gear characteristics are reported in Annex 5.
- Article 4 reports the reference to the derogation for the 20 mm mesh and the will to conduct an assessment of the impact of a larger mesh size (40 mm or other sizes) after the adoption of the Plan. No data are available to assess the impact of the gear on the habitat or on the marine resources exploited by these gears.
- Article 5 reports the areas where the *ganguï* fishery is authorised and the fishing periods, while Article 8 includes a detailed table for the various *métier* and zones. However, in the absence of appropriate data, it is impossible to assess the impact of the proposed plan.
- The target stocks are not identified by species (some only by family or groups) and no biological information about such stocks is reported. The previous plan (evaluated by STECF in its November 2007 Plenary Report) stated that information on cephalopods, crustaceans and echinoderms will be provided but such information is still absent from the current plan.
- The “*ganguï*” fishery is currently conducted under a derogation till 31 May 2010 (Article 14, Council Regulation (EC) 1967/2006). According to Article 13 of Council Regulation (EC) 1967/2006, any further derogation () should be based on scientific information relating to the impact of this fishery on the *Posidonia* ecosystem, which should impact not more than 30% of the *Posidonia* meadows in the Region and not more than 10% of the surface covered by the *Posidonia* at the national level. The French Plans report (Article 5.4): “Since not all the relevant information is available as yet, since fact-finding programmes are still being implemented and since some of the data in the form of sonograms have yet to be interpreted and some areas have not yet been studied, there are not yet enough hard facts on which to base an exhaustive scientific analysis. On the basis of the available data it is, however, possible to estimate that the *Posidonia* beds where fishing with *ganguis* and small *ganguis* takes place, represent no more than 33% of the regional offshore *Posidonia* grassbeds and less than 10% of the national *Posidonia* population”. Four maps are provided, showing several zones included in the Natura 2000 Directive. and the maps indicate that very few areas with *Posidonia* meadows still exist. No impact assessment of the *ganguï* fishery on *Posidonia* ecosystem is available.
- Given the lack of information of the extent of the impact that the practice of fishing with *Ganguï* has on fragile *Posidonia* beds, STECF advises that a precautionary approach should be adopted. In order to afford maximum protection to this fragile habitat, STECF recommends that the practice of fishing with *Ganguï* on fragile *Posidonia* beds should only be permitted if the impact on the habitat can be demonstrated to be negligible.
- No reference points are specified for any of the stocks or fisheries.
- The current fishing effort is not reported
- The proposals make no reference to other fisheries exploiting the same resources as the fleets referred to in the plans.
- There are no references to the restriction of the fishing activities in spawning and nursery areas and no reference is made regarding the minimum size regulation.

- No data or studies about the economic importance of these fisheries are reported and no economic impacts of the management plans are included.

Most of the above points were made in the STECF evaluation of a previous French Management Plan and reported in the November 2007 STECF Plenary Report. Evidently they have not been addressed in the preparation of the current plans.

V) Management plan for the dredge fishery in the Mediterranean:

- No objective is defined in terms of targets to be achieved for the maintenance of stocks. Article 1 merely states that the objectives are as follows:
 - a) to regulate dredge fishing in a rational and systematic manner while limiting the fishing effort;
 - b) to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity;
 - c) to take stock after one year and to propose appropriate ways of developing the present management plan.

It is not clear why one year is proposed as the appropriate time period under point c) above.
- According to Article 2, this fishery includes at least three *métiers*: beam dredges at sea, dredge fishing in lagoons and dredge fishing for shellfish.
- The information on the fleet of trawlers (74 vessels) is insufficiently detailed (Annex 3 of the Plan) and it is not possible to identify the main segments by *métier*.
- According to Article 5, this fishing gear should only be used by vessels less than 12 m in length and equipped with an engine power less than 225 kW. However, derogations are proposed as follows:
 - a) for one vessel greater than 12 m in length;
 - b) to all vessels built before 1 January 2007 with an engine power greater than 225 kW;
 - c) to three vessels which are authorised to carry on board and use two dredges at the same time, along with the derogation to operate outside the 3-mile zone.
- Dredge fishing is permitted between 0.3 to 3 miles from the coast (except for the areas having protected habitats) and in brackish and lagoon areas. The technical features of the dredges are defined in the plan, as well as the fishing periods and daily time schedule. It is forbidden to use hydraulic dredges and other fishing gears from vessels carrying a dredge.
- The management plan is applied, for the marine part, in the “*prud’homie*” areas; they will be responsible for the specific management and for establishing dedicated rules. A specific calendar and daily time schedule was provided for the dredge fishing activity inside lagoons within the plan evaluated by STECF in November 2007, but this is not included in the present plan.
- The target stocks are partly identified by species and no biological information for these stocks is reported. No assessment is available.
- No reference points are specified.
- The current fishing effort is not reported (according to Annex 5, the latest information on fishing effort was published in 1985).
- The proposals make no reference to other fisheries exploiting the same resources as the fleets referred to in the plans.
- There are no references to the restriction of the fishing activities in spawning and nursery areas. Annex 5 reports undefined catch of juvenile of various species and impact on benthic communities.
- No data or studies about the economic importance of these fisheries are reported and no economic impacts of the management plans are included.

Most of the above points were made in the STECF evaluation of a previous French Management Plan and reported in the November 2007 STECF Plenary Report. Evidently they have not been addressed in the preparation of the current plans.

ANNEX A1

**MANAGEMENT PLANS FOR CERTAIN
FISHERIES IN THE MEDITERRANEAN SEA**

**COUNCIL REGULATION (EC) No 1967/2006
of 21 December 2006**

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1 GENERAL INTRODUCTION

The French Mediterranean coast comprises two distinct geographical entities, namely the mainland coast, which stretches for some 700 kilometres from Cerbère to Menton, and the island of Corsica, with about 800 kilometres of coastline. On the basis of physical characteristics, the coastal waters are divided into four maritime zones:

- the Gulf of Lion,
- the continental shelf east of Marseille,
- the west coast of Corsica, and
- the coasts of eastern Corsica.

The Gulf of Lion chiefly comprises a vast continental shelf with an area of some 14 000 square kilometres covered in sandy deposits. This particular geomorphology has been conducive to the development of trawling there. Some rocky areas remain, however, along the Roussillon coast and to the south of Cap Béar, with outcrops extending to about 50 metres, and to the south and south-east of Sète, where the rocks extend to between 90 and 100 metres. The coastal region has numerous lagoons running parallel to the shoreline, which cover a total area of some 65 000 hectares; these are quite shallow, ranging from a depth of one metre to between ten and twelve metres, although some can be as deep as 27 metres. All of these lagoons have undergone profound changes as a result of either human activity or natural forces. They can be isolated, or almost isolated, from the marine environment or else linked to it by a natural estuary or man-made channel.

The configuration of the twelve-mile fishery zone differs widely between the eastern and western coastline of the French Mediterranean: shallow depths predominate in the inshore area of the Gulf of Lion, whereas to the east of Martigues and off the Corsican

coast the seabed reaches depths of more than 200 metres within a very short distance from the shore.

This contrasting geomorphology is reflected in the intensity of fishing activity in relation to distance from the coast. In the Gulf of Lion, it takes far more than the breadth of the twelve-mile zone for the sea to reach a depth of 200 metres, and fishing grounds cover a total area of some 14 000 square kilometres. In the other three areas, the fishing grounds are located within the twelve-mile strip and are far smaller – 1 940 km² to the east of Marseille and a little more than 1 500 km² around Corsica. These differences explain why the Gulf of Lion accounts for the bulk of the fishing effort in the French Mediterranean.

In the Gulf of Lion, small *métiers* – categories of fishing activity based on the use of specific gear and techniques – are very much to the fore, with 769 registered active entities and 81% of total manpower, followed by trawlers, tuna purse seiners and seiners with lampara nets. Three quarters of the seiners equipped with lampara nets operate out of Port-Vendres and the remainder operate out of Marseille. Three quarters of the tuna purse seiners and half of the trawlers operate out of Sète. The small *métiers* are quite evenly spread across the four Maritime Affairs Services around the Gulf: 171 are registered with the Maritime Affairs Service in Port-Vendres, 222 in Sète, 175 in Martigues and 201 in Marseille.

In the French Mediterranean, the part of the fleet devoted to small-scale *métiers* is defined by default as all fishing vessels except licensed trawlers and tuna and sardine vessels licensed to catch pelagic fish. Vessels that can catch pelagic fish with lampara nets are also excluded when they use those nets but are included when they pursue a different *métier*.

In terms of total manpower, the Mediterranean fleet is characterised by the predominance of these small *métiers*, which account for almost 90% of the total fleet and for virtually all of the vessels operating out of ports to the east of Marseille. The fleet is highly diverse, ranging from small boats of three to four metres in length to vessels of ten to sixteen metres. There are almost 50 *métiers*, most of which are very specific to particular fishing grounds. Set gillnets and trammel nets are by far the most frequently used gear; other techniques in use include fishing with troll lines or longlines and fishing by diving. Almost 60% of the activity of small *métiers* takes place between the shore and a depth of 20 metres.

Several vessels operate in waters more than 100 metres deep, mainly for the purpose of catching hake with gillnets.

Considering that:

- a. there is a need to maintain sustainable fishery activity in the maritime waters off the French Mediterranean coast;

- b. fishing is part of a wide range of fishery activities along the Mediterranean coastline in France, although some of these activities may be exclusive to certain areas;
- c. management measures are part of an effort to reduce or stabilise accident rates among fishermen, and these management plans may be revisited for the purpose of maintaining or altering the aim of this effort;
- d. the fishing activities in question are traditional Mediterranean coastal activities, the territorial distribution and practice of which are governed by the guild-like *prud'homies*;
- e. the fishing activities in question must take account of other activities carried out within the same areas;
- f. the introduction of management plans requires a certification process for vessels, gear and the relevant practices; in certain circumstances, it may be decided to insert a transitional stage before the rules are applied;
- g. the adopted management plans will be piloted by a monitoring committee comprising:
 - i. professional representatives of the regional and local maritime fisheries and fish-farming committees and fishery *prud'homies*,
 - ii. representatives of the relevant scientific bodies,
 - iii. representatives of the bodies responsible for managing territorial waters,
 - iv. representatives of the French Government and the relevant regional and local authorities, and,
 - v. in some cases, representatives of the relevant producers' organisations, which may belong to the monitoring committee by virtue of their power to intervene in the markets and hence regulate production;
- h. the monitoring committee will be appointed by the French Government; it will devise a system for assessing the implementation of the management plan and will take stock at intervals of not more than one year;
- i. the adopted management plans are designed to be part of a broader management plan covering more *métiers* and a wider geographical area;
- j. the proposed management plans may at any time be the subject of revision proposals made by the French Government after consulting the monitoring committee.

Management plans must contain reference levels for the conservation of fish stocks and of other living aquatic resources with a view to maintaining or improving the state of conservation of marine ecosystems. These conservation reference levels are

objectives which make it possible to assess the reconstitution of stocks within a biologically reasonable time frame.

The management plans are to guarantee that stocks will be exploited sustainably and that the effects of fishing activities on marine ecosystems will be kept at viable levels. The plans are to be formulated in accordance with the precautionary approach to fisheries management and take account of the critical reference levels recommended by the competent scientific bodies. In particular, they are to be based on the scientific, technical and economic opinions and reports drawn up by the Scientific, Technical and Economic Committee for Fisheries (STECF).

They may cover either fisheries devoted to single stocks or fisheries exploiting a combination of stocks, and they should take due account of interactions between stocks and fisheries.

In cases where more than one objective is set, the management plans are to specify the order of priority of the objectives.

These objectives are to be expressed in terms of:

- (a) the size of the fish population,
- (b) the long term yields,
- (c) mortality rates for each fishery, and/or
- (d) stability of catches.

The management plans are to be multiannual and to indicate the timetable for the achievement of the objectives they set.

The management plans may comprise any measures relating to fishing rules which are designed to regulate catch limits, namely:

- setting of the number and type of vessels licensed to fish;
- limitation of fishing effort;
- technical measures relating to:
 - o the structure of fishing gear, the quantity and size of the gear on board, the ways in which gear is used and the composition of retainable catches made with this gear,
 - o the establishment of areas or periods in which fishing is prohibited or restricted, including measures for the protection of spawning grounds and nurseries,
 - o the setting of minimum sizes for individual fish that may be retained on board and/or landed,
 - o specific action designed to minimise the impact of fishing activities on marine ecosystems and non-target species,
 - o the creation of incentive measures, including economic measures, to encourage more selective or low-impact fishing, and

- o the implementation of pilot projects relating to other types of fisheries-management methods.

The management plans may include measures corresponding to or going beyond the provisions of the aforementioned Regulation (EC) No 1967/2006 for the following purposes:

- greater selectivity in the choice of fishing gear,
- reduction of discards, and
- regulation of fishing effort.

The measures that must be included in the management plans are to be proportionate means of achieving the objectives and adhering to the prescribed timetable and take account of the following elements:

- the state of conservation of the stock or stocks,
- the biological characteristics of the stock or stocks,
- the characteristics of the fisheries in which the stocks are caught, and
- the economic implications of the measures for the fisheries in question.

France will provide for appropriate scientific surveillance of the management plans. In particular, some management measures relating to fisheries exploiting stocks of short-lived fish species will have to be revised annually to take account of changes that are likely to occur in recruitment strength.

Scientific, technical and economic opinions have been gathered with a view to systematically devising management measures for each type of fishing gear.

These opinions take account of:

- the state of conservation of the stock or stocks,
- the biological characteristics of the stock or stocks,
- the characteristics of the fisheries in which the stocks are caught,
- the economic implications of the measures for the fisheries in question, and
- the stock-conservation objectives.

It is important to emphasise that most Mediterranean resources are exploited by several *métiers*, which thus interact. Changes in the mortality rate resulting from the activity of trawling vessels, for example, may be beneficial or detrimental to the other *métiers*, and *vice versa*. Unlike trawlers, which are licensed to engage in only one activity, French netters are able to diversify by quickly switching the focus of their fishing effort to particular species, such as hake or sole. The quest for constant improvement and the evaluation of overall gains or losses therefore implies the need to consider all the *métiers* and their development.

2 MANAGEMENT PLAN FOR TRAWLING IN THE MEDITERRANEAN

Whereas the practice of trawling is subject to the implementation of a management plan within the meaning of Article 19 of Regulation (EC) No 1967/2006, and

whereas the implementation of a management plan within the meaning of Article 18 of Regulation (EC) No 1967/2006, covering fishing protected areas within the meaning of Chapter III of the said Regulation is the first step towards trawling in those areas,

the following plan is adopted:

Chapter 1 Objectives and definition

Article 1: Objectives

A management plan regulating trawler fishing is hereby established with the following main objectives:

- a. to regulate trawling activity in a rational and systematic manner,
- b. to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity, and
- c. to take stock after three years and to propose appropriate ways of developing the present management plan.

Article 2: Definition

Trawling is an occupational activity the technical characteristics of which are defined in accordance with Article 2 of Regulation (EC) No 1967/2006.

Chapter 2 Regulation of activity

Article 3: Fishing practices

The practice of pair trawling (two vessels towing one set of gear) is prohibited.

The use or storage on board of other types of gear than the trawl net is prohibited.

Article 4: Number of licensed vessels

The pursuit of commercial trawling shall be subject to the possession of a licence issued to a shipowner in respect of a specified vessel. This licence shall permit the use of trawl nets for the purpose of catching demersal species and/or small pelagic species. The licence shall permit the storage on board of both of these gear types.

The possession of a licence issued to a shipowner in respect of a specified vessel and the corresponding limitation of the number of licences shall serve to control the fishing effort.

Chapter 3 Monitoring and evaluation of activity

Article 5: Scientific monitoring and evaluation

The information gathered through the data-collection framework in application of Council Regulation (EC) No 1543/2000 shall be used to make analyses relating to this management plan.

In particular, scientific monitoring shall involve:

- a. analysing catches and discards,
- b. carrying out regular periodic assessment of the estimated abundance index and/or biomass index for the main target species in the production area, and
- c. setting up experiments in order to supplement the fulfilment of the obligations arising from Council Regulation (EC) No 1543/2000 by assessing the selectivity of the various types of fishing gear.

3. MANAGEMENT PLAN FOR BOAT SEINE FISHING IN THE MEDITERRANEAN

Whereas, in particular, boat seine fishing:

- is a selective form of fishing,
- contributes to the diversity of coastal fishing activities,
- is a *métier* that meets a market demand for coastal species, and
- is characterised by the absence of conflicting practices,

the following plan is adopted:

Chapter 1 Objectives and definition

Article 1: Objectives

A management plan regulating boat seine fishing is hereby established with the following main objectives:

- to regulate boat seine fishing in a rational and systematic manner,
- to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity, and
- to take stock after two years and to propose appropriate ways of developing the present management plan.

1.1.1. Article 2: Definition

Boat seine fishing is an activity which is carried out as part of a diversified approach. Practised with or without a lighting device, it involves the use of two types of pursed surrounding nets, one for whitefish species and one for small pelagic species.

Allatchare is a form of seine fishing practised offshore in Languedoc-Roussillon and chiefly entails scooping the following species from the seabed:

Dicentrarchus labrax (Linnaeus, 1758)
Dicentrarchus punctatus (Bloch, 1792)
Polyprion americanus (Bloch & Schneider, 1801)
Epinephelus marginatus (Lowe, 1834)
Epinephelus aeneus (Geoffroy Saint-Hilaire, 1817)
Epinephelus adscensionis (Osbeck, 1765)
Sparus aurata (Linnaeus, 1758)
Pagrus pagrus (Linnaeus, 1758)
Dentex dentex (Linnaeus, 1758)
Pagellus bogaraveo (Brünnich, 1768)
Pagellus acarne (Risso, 1826)
Pagellus erythrinus (Linnaeus, 1758)
Lithognathus mormyrus (Linnaeus, 1758)

It likewise involves the use of two types of pursed surrounding nets, one for whitefish species and one for small pelagic species.

Boat seine fishing comprises three different *métiers*:

- small lampara purse-seine fishing, practiced with vessels less than 12 metres in length,
- small-scale lampara fishing, practised with vessels at least 12 metres but less than 18 metres in length, and
- deep-sea lampara fishing, practised more than three miles from the shoreline with vessels of at least 18 metres but less than 25 metres in length.

Chapter 2 Regulation of activity

Article 3: Gear properties

In Languedoc-Roussillon, the overall length of vessels shall be less than twelve metres.

The net shall have a maximum length of 400 metres along the cork line, except in the case of vessels with a length of 18 metres or more.

The maximum drop of the net shall not exceed 30% of its total length.

The cod-end shall be located at the extremity of the net.

Minimum mesh size shall be:

- 60 millimetres (stretched mesh) for whitefish species;
- 14 mm (stretched mesh) for small pelagic species.

Article 4: Fishing areas and seasons

Small lampara purse-seine fishing and small-scale lampara fishing shall be practised in areas with a minimum water depth of 15 metres.

Deep-sea lampara fishing shall be practised at least three miles off the coast.

In the waters adjacent to the *département* of Var, small lampara purse-seine fishing is authorised in areas with a minimum water depth of 15 metres, small-scale lampara fishing is authorised in areas with a minimum water depth of 50 metres, and deep-sea lampara fishing is not permitted.

In accordance with Article 4(1) of Regulation (EC) 1967/2006, it is requested that the *métiers* of small lampara purse-seine fishing, small-scale lampara fishing and deep-sea lampara fishing benefit from the derogation whereby boat seine fishing may be authorised in protected habitats, since the net does not touch the seagrass bed. The absence of contact with the seagrass bed effectively ensures that aquatic plant habitats are not disturbed.

This activity may be practised throughout the year.

The activity shall be subject to the administrative authority of the *prud'homies* responsible for fishing activity.

1.1.2. Article 5: Target species and fish sizes

If fish are caught which are below the minimum size defined by national and European regulations, they shall be released alive into their environment of origin.

Chapter 3 Monitoring and evaluation of activity

Article 6: Catch declarations

Catch declarations must be made in respect of boat seine fishing.

Article 7: Scientific monitoring and evaluation

A system of scientific monitoring shall be established, focusing primarily on:

- analysis of catches and selectivity, and
- analysis of landed catches and of the fishing effort.

Chapter 4 Evaluation and development of the management plan

Article 8: Provisional evaluation

The information gathered through the data-collection framework in application of Council Regulation (EC) No 1543/2000 shall be used to make analyses relating to this management plan.

An evaluation of the management plan shall be carried out annually after its adoption. Following this stocktaking, the management plan may be amended.

Article 9: Development of the management plan

New provisions for the coming year: the creation of a licence should serve to limit the fishing effort by means of quotas.

N.B. By way of derogation from Articles 2 and 4, vessels with a length in excess of 18 metres which are shown to predate 1 January 2008 may be exempted from the fishing prohibition within three miles of the shoreline, except in the waters of the Local Marine Fisheries Committee (CLPMEM) for the *département* of Var, but their fishing activity within the three-mile zone shall be restricted to waters with a minimum depth of 25 metres. This exemption has been granted to the following vessels:

Vessel	Registration number
The <i>Bernadette 2</i>	MT 330 139
The <i>Aurora</i>	MA 308 168
The <i>Ville d'Arzew</i>	MA 172 529

4 MANAGEMENT PLAN FOR BEACH SEINE FISHING IN THE MEDITERRANEAN

Whereas, in particular, beach seine fishing:

- is a traditional Mediterranean coastal activity, the territorial distribution and practice of which are governed by the local *prud'homies*, and plays a supporting role in cultural events and educational activities, and
- is subject to the implementation of a management plan within the meaning of Article 19 of Regulation (EC) No 1967/2006,

the following plan is adopted:

1.1.2.1. Chapter 1 Objectives and definition

Article 1: Objectives

A management plan regulating beach seine fishing is hereby established with the following main objectives:

- a. to regulate beach seine fishing in a rational and systematic manner,
- b. to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity, and
- c. to take stock after three years and to propose appropriate ways of developing the present management plan.

Article 2: Definition

Beach seine fishing is a commercial activity which is carried out as part of a diversified approach and which is authorised in conjunction with the practice of other *métiers*.

The gear is a net which is set from a vessel less than 18 metres in length and hauled from the shore.

The total all-inclusive length of the net shall not exceed 450 metres.

The drop of the net shall not exceed ten metres.

The minimum mesh size shall be 14 millimetres stretched.

Chapter 2 Regulation of activity

Article 3: Fishing areas and seasons

The use of beach seines shall be subject to the fishing prohibitions that apply in protected habitats.

Beach seine fishing may be practised every year from 1 April to 30 November inclusive.

The activity shall be subject to the administrative authority of the *prud'homies* in accordance with the customary practice of drawing lots for the allocation of fishing locations.

Article 4: Fishing effort

The use of beach seines is limited to a maximum of 150 days a year per vessel, including educational demonstrations and participation in cultural events.

The use of motorised craft to tow the nets is prohibited.

As part of the process of establishing licences or special fishing permits, a quota shall be made available for boats that are able to claim the right to engage in this practice.

Article 5: Target species and fish sizes

Shore-seine catches comprise various species. If fish are caught which are below the minimum size defined by national and European regulations, they shall be released alive into their environment of origin.

Article 6: Exemption for traditional *poutine* fishing

An exemption shall be granted in the waters adjacent to the *département* of Alpes Maritimes for the period from 1 February to 31 May each year for boats with a

maximum overall length of twelve metres to catch juveniles of small pelagic species, using nets with a maximum length of 200 metres and a mesh size of two millimetres.

Chapter 3 Monitoring and evaluation of activity

Article 7: Scientific monitoring and evaluation

The information gathered through the data-collection framework in application of Council Regulation (EC) No 1543/2000 shall be used to carry out analyses relating to this management plan.

In particular, scientific monitoring shall involve:

- a. analysing fishing efforts, catches and discards,
- b. setting up experiments in order to supplement the fulfilment of the obligations arising from Council Regulation (EC) No 1543/2000 by assessing the selectivity of fishing gear and evaluation of escape rates for live fish, and
- c. carrying out specific statistical monitoring of traditional *poutine* fishing.

Chapter 4 Evaluation and development of the management plan

Article 8: Provisional evaluation

An evaluation of the management plan shall be carried out two years after its adoption. Following this appraisal, the management plan may be amended.

5 MANAGEMENT PLAN FOR GANGUI FISHING IN THE MEDITERRANEAN

- In view of the need to adapt the fishing effort to the volume of resources so that the exploitation of these resources is sustainable and safeguards the environment,
- in consideration of the provisions of Council Regulation (EC) No 1967/2006 of 19 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea,
- whereas the establishment of a management plan for *gangui* fishing is part of a diversified and balanced approach to the fishing activities carried out in the region,
- in view of the cultural, social and economic importance of regional fishing activity and its importance in fostering tourism, and
- in view of the need to perpetuate or further reduce the low accident rate connected with the practice of *gangui* fishing,

the following plan is adopted:

Chapter 1 Objectives and definitions

Article 1: Objectives

A management plan regulating *gangui* fishing is hereby established with the following main objectives:

- a. to regulate a traditional activity in a rational and systematic manner, while ensuring that know-how is passed on,
- b. to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity, and
- c. to take stock after one year and to propose appropriate ways of developing the present management plan.

Article 2: Definitions

1. The term '*gangui*' describes a type of net used in fishing activity from a vessel with an overall length not exceeding twelve metres, equipped with an engine not exceeding a capacity of 85 kilowatts, in which demersal nets are towed at a maximum speed of 2.5 knots to catch a range of coastal demersal species within the three-mile zone; *gangui* fishing is traditionally practised on *Posidonia* beds.
2. This management plan shall apply to the area contained between the waters overseen by the *Prud'homie* of La Ciotat and those overseen by the *Prud'homie* of Cannes within the three-mile limit.
3. A specific licence shall be issued for engagement in this activity; the licence shall regulate the length of vessels, their engine capacity, their fishing gear and the number of licensed vessels.
4. *Gangui* vessels are divided into two categories:
 - a. Small *gangui* vessels, with a maximum engine capacity of 50 kW, operate with gear weighing a maximum of 30 kilograms, excluding the net, and a bag breadth of 1.5 metres.
 - b. Vessels with a maximum engine capacity of 85 kW equipped with *ganguis* mounted on rigid steel frames or held open by means of otter boards:
 - *ganguis* with wooden otter boards weighing up to 60 kilograms (excluding rigging) which are used at depths of at least 12 metres, or
 - *ganguis* with otter boards weighing more than 60 but not more than 90 kilograms (excluding rigging), which are used at depths of at least 30 metres, or
 - *ganguis* mounted on rigid steel frames, which are used at depths of at least 12 metres.

Chapter 2 Regulation of activity

Article 3: Fishing licences

No one who is not a licence holder may practise *gangui* fishing.

This licence shall be issued by the Regional Marine Fisheries Committee (*Comité régional des pêches et des élevages marins*) of the Var *département* after it has consulted the French Research Institute for Exploitation of the Sea (Ifremer) and the Regional Directorate for Maritime Affairs in response to a proposal from the *prud'homies* for the *départements* of Bouches du Rhône, Alpes Maritimes and Var.

The licence shall apply jointly to shipowners and vessels and shall be issued annually after the stocktaking meeting and is valid for one year until the next stocktaking meeting.

Renewals shall be effected on a one-for-one basis.

The number of licences granted shall be the number established when the management plan was adopted.

List of licensed vessels

1.1.2.2. Vessel	Registration No	Owner/skipper	<i>Prud'homie</i>
<u>GANGUI VESSELS, DÉPARTEMENT OF VAR</u>			
1 LULU IV	TL 326 034	Charly Berenguier	Giens
2 OH DUDU	TL 328 470	Frédéric Durandetto	Giens
3 ALAIN II	TL 326 312	Alain Gautier	Giens
4 ERIDAN	TL 299 467	Dominique Godde	Hyères
5 MILON	TL 326 173	Philippe Parlier	Hyères
6 LES 2 FRERES	TL 326 091	Daniel Peronnet and Jean Canale	Les Salins d'Hyères
7 MATHIEU	TL 326 191	Nicolas Raoult	Carqueiranne
8 BERNADETTE	TL 326 090	Bernard Thollon	Hyères
9 JEFF	TL 326 030	Alain Libassi	Toulon
10 MAXENCE	TL 221 296	Jean-Pierre Cazaux	Toulon
11 ELOAM	TL 326 275	Alain Peyruchaud	Hyères
12 PIERROT	TL 326006	Ladislav Hawrot	Toulon
Vessel	Registration No	Owner/skipper	<i>Prud'homie</i>
13 JUSTINE ENZO	TL 540 568	Cyril Scichilone	Toulon
14 NOSTALGIE	TL 326 109	Christian Saragossa	Les Salins d'Hyères
15 MANUEL	TL 326 095	Eric Fernandez	Toulon
16 ST-DENIS	TL 326 038	Philippe Broccard	Hyères
17 St-ANDRE	TL 326 216	Damien Astier	Hyères
18 CECILE	TL 325 121	Jean-Marius Lieutaud	St-Mandrier
19 GIGI	TL 326 251		St-Mandrier
20 MARYSE	TL 326 056	Luc Coupez	Hyères
21 PIERRE JEAN	TL 350 198	Patrick Guiol	Les Salins d'Hyères
22 LE ST-ELMOIS	TL 447 999	Didier Ranc	La Seyne sur Mer
23 LE TARTARIN	TL 326 147	Alain Angeli	Giens
24 RATON	TL 326 193	René Astier	Hyères
25 DIOUF	TL 326 262	René Bonadies-Turle	Les Salins d'Hyères
26 JO CLE	TL 326 037	Jean-Pierre Cartini	Carqueiranne
27 PASICHAMI	TL 326 253	Paul Peyron	Carqueiranne
28 LE GANGSTER	TL 326 242	Jean-Pierre Volland	St-Tropez

GANGUI VESSELS, DÉPARTEMENT OF BOUCHES DU RHÔNE (Regulated by the *Prud'homie* as small *gangui* vessels)

29 JULIETTA	MA 180 829	Jean Pierre Durand	La Ciotat
30 VELEA	MA 819 559	Lionel Corselis	La Ciotat
32 MELISA	MA 741 371	Daniel Hili	La Ciotat
33 MARC ERIC	MA 499 151	Eric Bayonna	La Ciotat
34 TCHITCHOU	MA 481 341	Marc Gastaud	La Ciotat
35 LADYVAN	MA 481 115	G�rard Carrodano	La Ciotat

SMALL GANGUI VESSELS, D PARTEMENT OF VAR

1 SYLFASO	TL 680 312	Fabrice Archier	Le Brusc
2 MATHIEU	TL 326 364	Antoine Casteldaccia	Bandol
3 LOUIS-SEBASTIEN	TL 653 792	Guy D'Arco	St-Tropez
4 St-MICHEL/CHRISTINE	TL 700 978	Max Deleage	Ste-Maxime
5 Ste-DOLORES II	TL 629 172	Ange Decrux	Ste-Maxime
6 AZUR	TL 418 165	Eric Feraud	Le Brusc
7 PIRATE II	TL 212 925	Eric Feraud	Le Brusc
8 FINISTERE	TL 350 913	S�bastien Mortier	Cavalaire
9 LES TROIS FRERES	TL 326 328	Jean Romeo	St-Rapha�l
10 SANTA MARIA	TL 326 421	Thierry Raut	St-Mandrier
11 VA SANS CRAINTE	TL 438 391	Jean-Luc L�bre	Le Brusc
12 HIPPOCAMPE	TL 263 688	Alain Marchal	Le Brusc
13 MOSSIEUR BRUN	TL 727 972	Christian Molinero	Le Lavandou
14 DEUX FRERES	TL 326 430	Pascal Raggio	St-Tropez
15 VAGABOND	TL 326 434	Andr� Raggio	St-Tropez
16 St-FELIX	TL 745 994	J�r�me Rustarucci	Le Lavandou
17 NELOIN	TL 679 971	Michel S�venier	Le Lavandou
18 St-SYLVERE	TL 326 402	Louis Vitiello	Le Lavandou

SMALL GANGUIS, D PARTEMENT OF ALPES MARITIMES

19 PIERRETTE	NI 305 033	Jean-Baptiste-Brunel	Cannes
20 BANIC II	NI 458 260	Jean Chevrier	Cannes
21 LULU	NI 456 770	Vincent Lubrano	Cannes

Article 4: Mesh sizes – gear dimensions

- 4.1.** The management plan invokes Article 14 of Regulation (EC) No 1967/2006, which permits the use of a minimum mesh size of 20 millimetres until 31 May 2010 (national legislation: Order of 19 December 1994 laying down technical regulations for commercial fishing in the continental Mediterranean – Official Journal of 26 January 1995 – NOR AGRM9492461A).

As soon as the management plan has been approved, trials shall be conducted with scientists from Ifremer to observe the impact on fishing and on the environment of a mesh size of 40 millimetres. Since the aim is to achieve greater selectivity, experiments may be conducted with various mesh sizes.

4.2. Mesh sizes and gear dimensions

- For *ganguis* targeting fish and shrimps, the minimum mesh size of the cod-end shall be 20 millimetres stretched, and the length of the towed net shall be 35 metres.
- For *ganguis* targeting sea urchins, the minimum mesh size of the cod-end shall be 80 millimetres stretched, the maximum breadth of the bag

shall be 1.5 metres, the length of the towed net shall be 10 metres, and the weight of the gear shall be 30 kilograms.

- c. For *ganguis* targeting sea squirts, the minimum mesh size shall be 50 millimetres stretched, and the length of the towed net shall be 15 metres.
- d. For small *ganguis*, the minimum mesh size of the cod-end shall be 20 millimetres stretched, and the length of the towed net shall be 10 metres.
- e. The transverse bar must be round in cross-section, and the chain that guides it must be sheathed.

Article 5: Fishing areas and seasons

5.1. Fishing areas and seasons shall be described in the regulations enacted by the *prud'homies*.

5.2. Authorised areas: *Gangui* fishing, including the use of the small *gangui*, may be practised only in the waters overseen by the *prud'homies* of La Ciotat, Bandol, Le Brusc, La Seyne-sur-Mer (La Seyne-sur-Mer and Saint-Mandrier sections), Toulon (Toulon, Giens, les Salins d'Hyères, Carqueiranne and Hyères sections), Le Lavandou, Saint-Tropez (Saint-Tropez, Sainte-Maxime and Cavalerie sections) and Cannes.

Each *prud'homie* shall regulate the practice of these activities in its territories in accordance with the management plan.

5.3. Authorised fishing periods

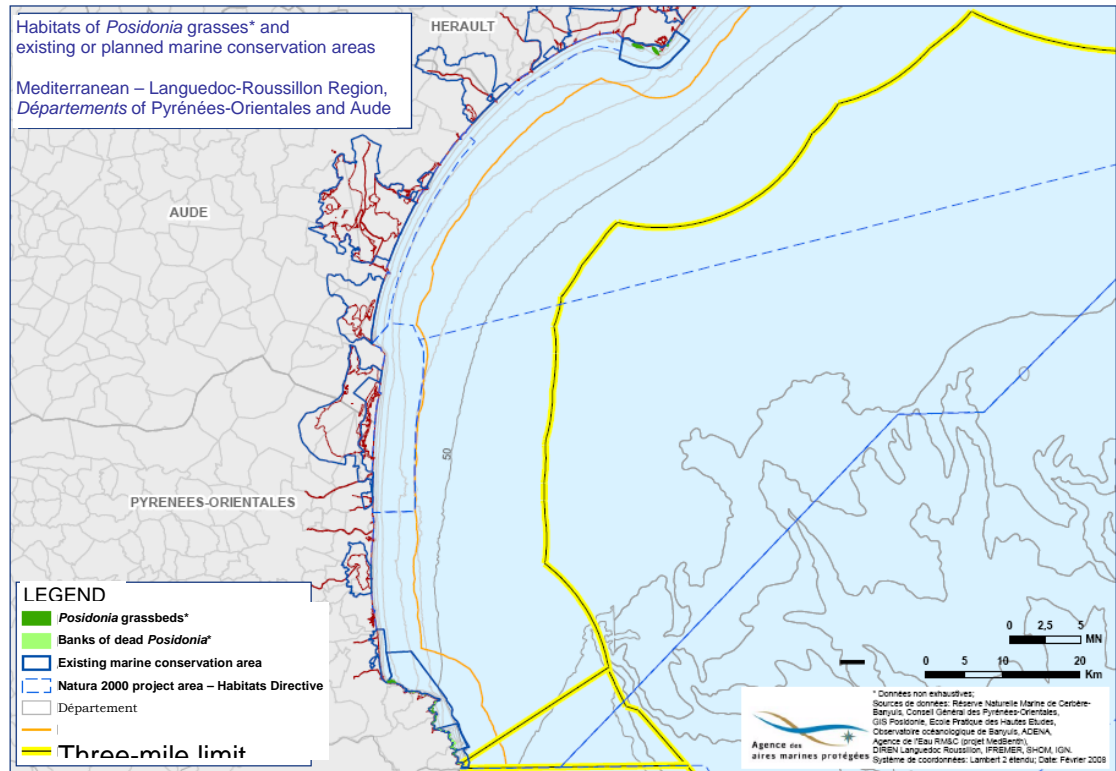
- a. **Small *ganguis*:** Fishing with small *ganguis* shall be limited to a 90-day period the start and end dates of which shall lie between 1 November and 31 March and shall be set by each *prud'homie*. A small *gangui* vessel may operate for a maximum of 90 days in any year. Provision may be made for an alternative arrangement in the form of a quota of fishing days rather than a limited number of vessels. Activity shall therefore cease each year on 31 March at the latest, by which time the quota of fishing days will have been completed.
- b. **Other *ganguis*:** Fishing with the larger forms of *gangui* can take place at any time of the year – by day or by night, depending on area and season (see the table after Article 8 below). Vessels may operate with these *ganguis* for a maximum of 200 days per annum.

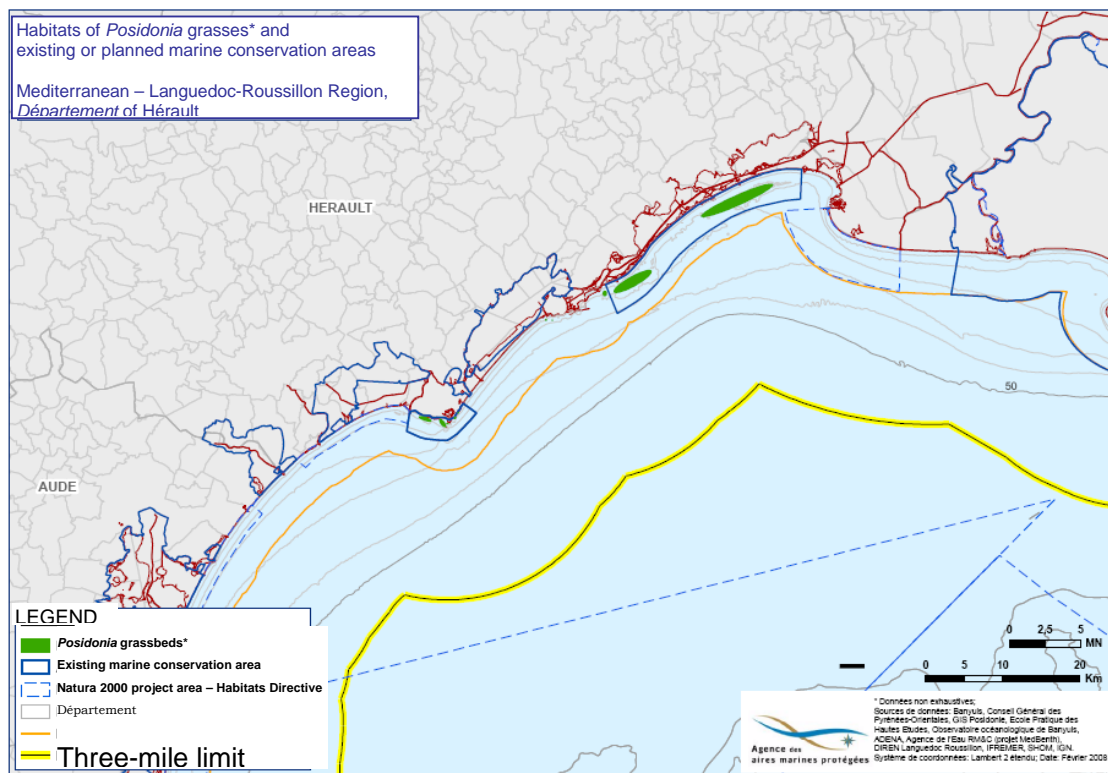
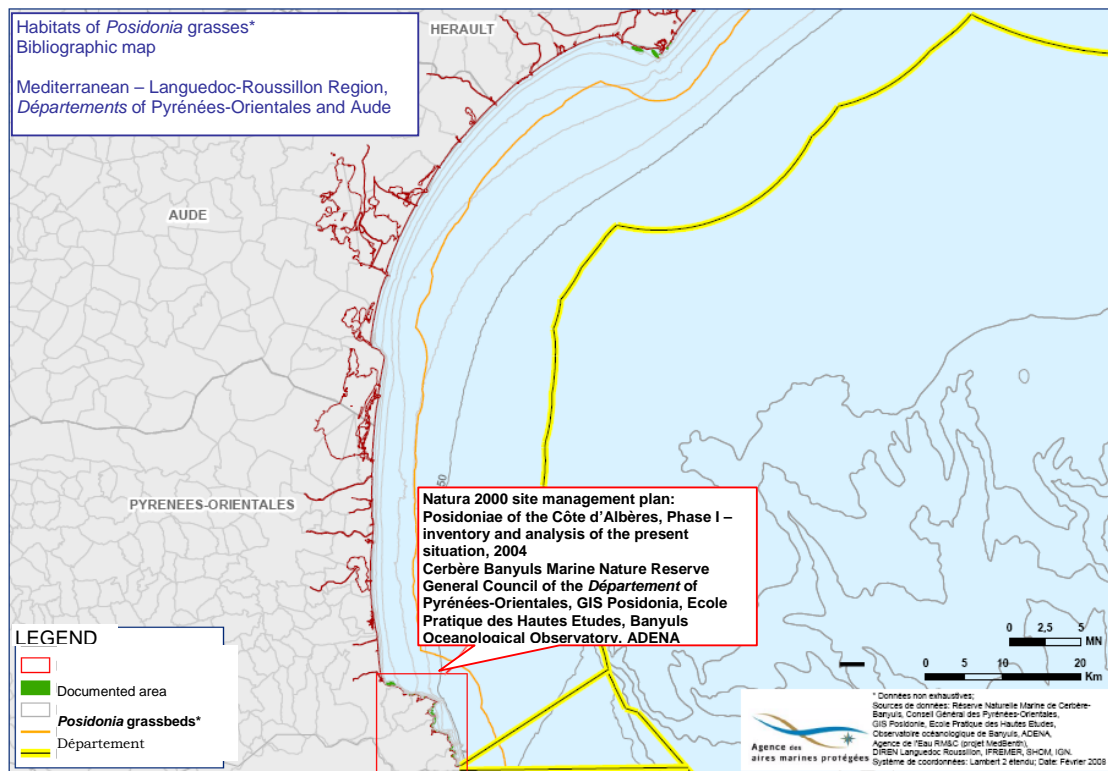
5.4. Percentage of grassbeds accessible to vessels

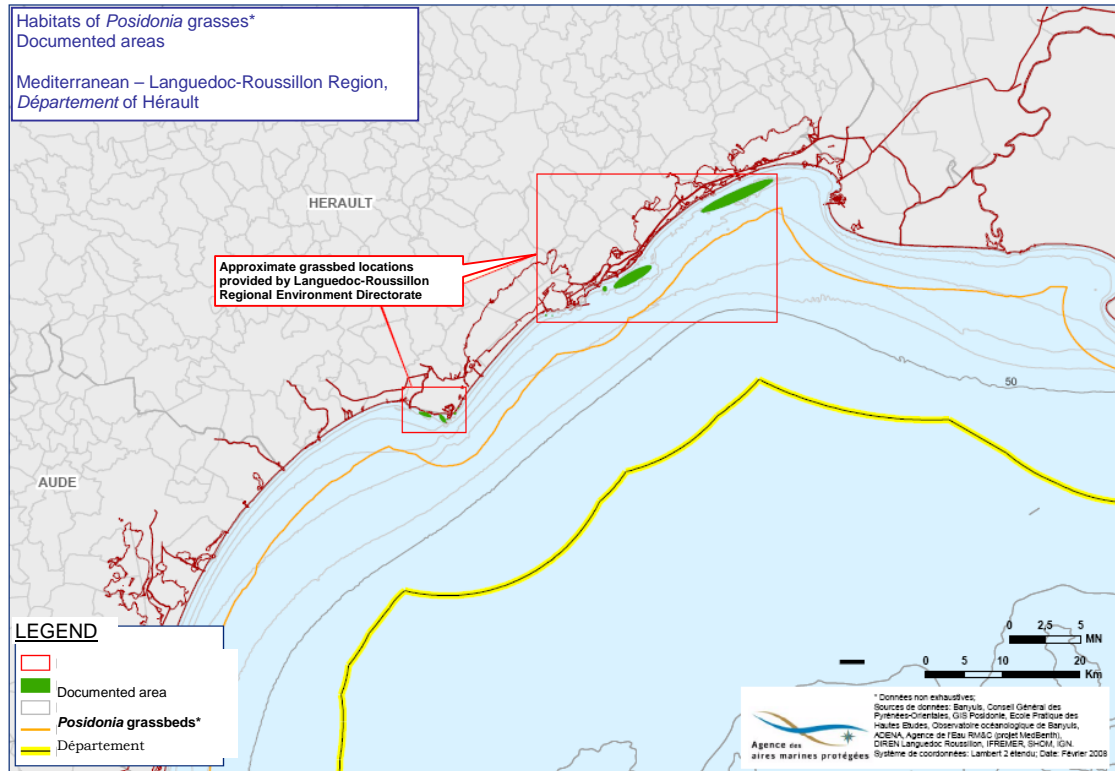
Since not all the relevant information is available as yet, since fact-finding programmes are still being implemented and since some of the data in the form of sonograms have yet to be interpreted and some areas have not yet been studied, there are not yet enough hard facts on which to base an exhaustive scientific analysis.

On the basis of the available data it is, however, possible to estimate that the *Posidonia* beds where fishing with *ganguis* and small *ganguis* takes place represent no more than 33% of the regional offshore *Posidonia* grassbeds and less than 10% of the national *Posidonia* population.

The maps below show the existing data that are currently available:







5.5. Areas administered in specific ways

Each *prud'homie* shall define, within the territory for which it is responsible, periods during which activities determined by the use of *gangui*-type gear or by the targeting of a species or of a category covering various species are permitted or prohibited; these restrictions might, for example, relate to:

- a. **areas administered by the *prud'homies*** where fishing of any kind is prohibited at certain times of the year;
- b. **no-take zones:** several *prud'homies* have no-take zones under their jurisdiction, where all forms of fishing may be prohibited throughout the year or in particular seasons; a no-take zone is established by a ministerial order;
- c. **Natura 2000 project areas:** fishing regulations apply in these areas too, but they are subject to closer supervision; special provisions may cover recreational fishing, and exceptional provisions may be adopted in Natura 2000 areas by agreement with the fishing industry – as in the case of the Brusc lagoon, for example (see the annexed list);
- d. **specific areas**
 - Ile du Levant: test facility for ballistic weapons and other military areas,
 - Ile de Port Cros: national park;
- e. **restrictions for specific events,** on which the fishing industry shall be consulted:

- military exercises, and
- maritime tourist or sporting events.

5.6. Families of target species:

Families of fish:

- *Blenniidae*,
- *Carangidae*,
- *Centracanthidae*,
- *Gobiidae*,
- *Labridae*,
- *Morodinae*,
- *Mugilidae*,
- *Mullidae*,
- *Pomacentridae*,
- *Scorpaenidae*,
- *Serranidae*,
- *Sparidae*,
- *Triglidae*,
- *Uranoscopidae*,
- *Trachinidae*,
- *Zeidae*

Families of cephalopods
(List to follow)

Families of crustaceans
(List to follow)

Families of echinoderms
(List to follow)

5.7. List of *prud'homies* affected by the management plan for *gangui* fishing

- La Ciotat
- Bandol
- Le Brusc
- La Seyne-sur-Mer:
 - La Seyne-sur-Mer section
 - Saint-Mandrier section
- Toulon:
 - Toulon section
 - Giens section
 - Les Salins d'Hyères section
 - Carqueiranne section
 - Hyères section
- Le Lavandou

- Saint-Tropez:
 - Saint-Tropez section
 - Sainte-Maxime section
 - Cavalaire section
- Cannes.

Chapter 3 Evaluation and development of the management plan

Article 6: Monitoring criteria and experiments

- In addition to the general reporting obligations, fishermen who practise these *métiers* must compile and present monthly declarations comprising, **for each vessel**, a summary of catches, fishing days, areas visited, accidents and lost nets, including action taken to recover them.
- **These data, when aggregated**, should serve to reveal the percentage of grassbeds visited by the fleets of *gangui* vessels and the increase or decrease in their fishing effort as well as providing a basis for the assessment of stock trends.
- **The checks conducted** by the maritime authority shall be described each year in a separate document.
The checks shall focus especially on:
 - the weight and length of fishing gear,
 - the weight of wooden otter boards which are subject to the 60-kg weight limit or of other otter boards that are subject to a 90-kg limit,
 - consistency between the declarations of areas visited and the areas that are actually being fished,
 - mesh size used, and
 - checks carried out in specific areas (national park, military areas, Natura 2000 project areas, no-take zones, etc.).

Article 7: Annual stocktaking meeting

In accordance with the general remit assigned to the steering committee on management plans, the main objectives of the annual meeting on *gangui* fishing shall be as follows:

- **to catalogue the monitoring criteria,**
- **to catalogue the experiments and other activities carried out with scientists:**
 - report on testing of equipment (mesh sizes and specific measures), and
 - report on the measured impact of the new provisions adopted at the previous stocktaking meeting,
- **to adopt new provisions for the coming year:**
 - scheduled scientific trials, and
 - amendments to regulations, and
- **to draw up the list of vessels licensed to fish in the coming year.**

Article 8 :

A period of two years will be required after the publication of the management plan for sufficient data to be gathered on the pattern of fishing activity at the *Posidonia* grassbeds to constitute a coherent body of evidence (collection of scientific data on the extent of the grassbeds and precise delimitation of the fishing areas).

As soon as the management plan enters into force, trials will be conducted with scientists from Ifremer to observe the impact on fishing and on the environment of a mesh size of 40 by 40 millimetres.

Table of fishing periods						
<u>Prud'homies and sections</u>	<u>Small ganqui for fish, shrimps and sea urchins</u>	<u>Ganqui for fish</u>	<u>Ganqui for sea urchins</u>	<u>Ganqui for sea squirts: prohibited on grassbeds</u>	<u>Ganqui with otter-boards for fish</u>	<u>Ganqui with otter boards for sea squirts: prohibited on grassbeds</u>
<u>LA CIOTAT</u>	North of a line drawn between the lighthouse on Bérourard breakwater and Pointe Grenier. From 15 December to the last day of February, from 8 a.m. to 10 p.m., Monday to Friday, except public holidays					
<u>BANDOL</u>	1 November to 31 March (90 days)					
<u>LE BRUSC</u>	Authorised from 1 November to 31 March; map attached	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
<u>LA SEYNE-SUR-MER / ST-MANDRIER</u>	1 November to 31 March (90 days)	Authorised throughout the area, with the exception of a zone stretching from Cap Sicié to Pointe de Maregau, day and night except for the period from 1 May to 30 September	Prohibited	Prohibited	Prohibited	Prohibited
<u>TOULON</u>	1 November to 31 March (90 days)	At night from 1 October to 30 April and during the day from 1 May to 30 September	Only during the open season for sea-urchin fishing	In daytime from 1 September to 30 April	Prohibited	Prohibited

<u>SUD GIENS</u>	1 November to 31 March (90 days)	At night from 1 September to 15 March between La Fourmigue islet and Ribaud island	In daytime from 1 June to 31 August and at night from 1 November to 15 March between La Fourmigue islet and Ribaud island	At night from 1 November to 15 March between La Fourmigue islet and Ribaud island	At night from 1 November to 15 March between La Fourmigue islet and Ribaud island	At night from 1 November to 15 March between La Fourmigue islet and Ribaud island
<u>NORD GIENS</u>		At night from 1 October to 30 April and in daytime from 1 May to 30 September between La Formigue and Passe Pieds	At night from 1 October to 30 April and in daytime from 1 May to 30 September between La Formigue and Passe Pieds	At night from 1 October to 30 April and in daytime from 1 May to 30 September between La Formigue and Passe Pieds	At night from 1 October to 30 April and in daytime from 1 May to 30 September between La Formigue and Passe Pieds	At night from 1 October to 30 April and in daytime from 1 May to 30 September between La Formigue and Passe Pieds
<u>LES SALINS D'HYERES</u>	1 November to 31 March (90 days)	Authorised	Authorised from 1 September to 30 April	Authorised	Authorised	Authorised from 1 September to 30 April
<u>CARQUEIRANNE</u>	1 November to 31 March (90 days)	At night from 1 October to 30 April and in daytime from 1 May to 30 September	Only during the open season for sea-urchin fishing	1 September to 30 April	At night from 1 October to 30 April and in daytime from 1 May to 30 September	Prohibited
<u>HYERES/ PORQUEROLLES</u>	1 November to 31 March (90 days)	South of the island – between Petit Sarranier islet and La Jaune Garde du Langoustier at night from 16 October to 31 March and in daytime from 1 April to 15 October; northern part of Porquerolles down to the Sarranier barrier day and night all year to the east of a line following the Hyères lights	1 September to 30 April - South of the island – between Petit Sarranier islet and La Jaune Garde du Langoustier; at night from 16 October to 31 March	1 September to 30 April	South of the island – between Petit Sarranier islet and La Jaune Garde du Langoustier at night from 16 October to 31 March and in daytime from 1 April to 15 October; northern part of Porquerolles down to the Sarranier barrier day	1 September to 30 April

		through the Pointe de l'Esterel			and night all year to the east of a line following the Hyères lights through the Pointe de l'Esterel	
<u>LE LAVANDOU</u>	15 November to 31 March	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
<u>ST-TROPEZ / STE-MAXIME/ CAVALAIRE</u>	15 November to 31 March	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
<u>CANNES</u>	1 November to 31 March (90 days)	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
<u>ANTIBES</u>	1 November to 31 March (90 days)	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited

6. MANAGEMENT PLAN FOR DREDGE FISHING IN THE MEDITERRANEAN

Whereas, in particular,

- a. it is necessary to strike a balance between fishing activities carried out in the same area with towed gear and static gear and to respect measures taken to protect habitats, and
- b. Member States are required to adopt a management plan for dredge fishing practised in their territorial waters,

the following plan is adopted:

Chapter 1 Objectives and definition

Article 1: Objectives

A management plan regulating dredge fishing is hereby established with the following main objectives:

- a. to regulate dredge fishing in a rational and systematic manner while limiting the fishing effort,
- b. to ensure that additional information is made available as a basis for diagnostic analysis of the regulated activity, and
- c. to take stock after one year and to propose appropriate ways of developing the present management plan.

Article 2: Definition

A dredge is a piece of fishing gear which is actively towed by the main boat engine to catch bivalves, tunicates, gastropods, sea urchins and sponges. It consists of a net bag or metal basket mounted on a rigid frame or beam of variable size and shape.

In coastal areas, dredging activity can be divided into three categories:

- fishing with beam dredges, practised exclusively at sea and in Languedoc-Roussillon,
- dredge fishing in ponds, practised exclusively in lagoons, and
- dredge fishing for shellfish.

Chapter 2 Regulation of fishing with beam dredges

Article 3: Gear properties

The dredge must satisfy the following requirements:

- a. The lower part of the metal structure shall consist only of a flat non-cutting beam without teeth and without runners or depressor plate.
- b. Hydraulic dredge systems shall be prohibited.
- c. By way of derogation from Community legislation, the dredge shall have a maximum length of four metres, provided that only one dredge is kept on board and used.
- d. The metal structure of the gear, including the bridle, shall not exceed 90 kilograms in weight.
- e. The minimum mesh size shall be 55 millimetres stretched.

Article 4: Fishing areas and seasons

The use of beam dredges is prohibited within 0.3 miles of the shore and on protected habitats. Each *prud'homie* shall be responsible for managing the areas within its jurisdiction where fishing with beam dredges may take place (between 0.3 and three nautical miles from the shoreline) and for prescribing the permissible fishing times within these areas.

Each *prud'homie* is required to update its rules governing the operation of beam dredges in accordance with the management plan and in order to accommodate any new factors that should be taken into consideration.

Fishing activity must comply with the rules governing the public-health classifications of shellfish production areas.

The activity shall be permitted from 3 a.m. until 3 p.m. Each *prud'homie* may restrict the authorised fishing times within that period.

The activity shall be prohibited at weekends and on public holidays.

Article 5: Fishing effort

Vessels carrying a beam dredge may not have any other fishing gear on board.

Notwithstanding temporary exemptions specified in the annex to this management plan, vessels practising this form of fishing may carry on board or tow only one beam dredge.

For safety reasons, the maximum engine capacity of vessels shall be 225 kilowatts.

The overall length of vessels shall not exceed twelve metres.

Article 6: Target species

Fishing with beam dredges may target shellfish species other than burrowing species and shall be carried out in accordance with European and national regulations regarding size limits.

The presence of marine organisms other than permissible shellfish may not exceed 10% of the total live weight of the catch retained on board.

Chapter 3 Regulation of fishing with pond dredges

Article 7: Gear properties

Pond dredges must satisfy the following requirements:

- The lower part of the metal structure shall consist only of a flat non-cutting beam without teeth and without runners or depressor plate.
- Hydraulic dredge systems shall be prohibited.
- The dredge shall have a maximum length of 1.25 metres.
- The metal structure of the gear, including the bridle, shall not exceed 35 kilograms in weight.
- The minimum mesh size shall be 75 millimetres stretched.

Article 8: Fishing areas and seasons

Fishing activity must comply with the orders enacted by the prefect of the relevant *département* governing the public-health classifications of shellfish production areas.

Fishing with pond dredges shall be authorised in lagoons only. For the lagoons referred to below, the fishing seasons are as follows:

- from 15 October to 20 January in the Salses-Leucate and Barcarès lagoons, and
- from 15 October to 30 April in the Thau and Ponant lagoons.

The activity shall be permitted from 8 a.m. until 2 p.m.

The activity shall be prohibited at weekends and on public holidays.

Article 9: Fishing effort

Vessels carrying a pond dredge may not have any other fishing gear on board. Vessels practising this form of fishing may carry on board or tow only one pond dredge.

The overall length of vessels shall not exceed twelve metres.

The maximum engine capacity of vessels shall be 85 kilowatts (access criterion for Natura 2000 sites as prescribed by Regulation (EC) No 1967/2006).

Article 10: Target species and fish sizes

Fishing with pond dredges may target shellfish species other than burrowing species and sea urchins and shall be carried out in accordance with European and national regulations regarding size limits.

The presence of marine organisms other than permissible shellfish may not exceed 10% of the total live weight of the catch retained on board.

Chapter 4 Regulations governing fishing with shellfish dredges

Fishing with shellfish dredges is practised in the Gulf of Fos and must therefore comply with the conditions governing fishing in the area within the jurisdiction of the Autonomous Port of Marseilles.

Article 11: Gear properties

Shellfish dredges must satisfy the following requirements:

- The lower part of the metal structure shall consist only of a flat non-cutting beam without teeth and without runners or depressor plate.
- The dredge shall have a maximum length of 1.25 metres.
- The metal structure of the gear, including the bridle, shall not exceed 25 kilograms in weight.
- The minimum mesh size shall be 80 millimetres stretched.

Article 12: Fishing areas and seasons

Fishing activity must comply with the orders enacted by the prefect of the relevant *département* governing the public-health classifications of shellfish production areas.

(1) Carteau Bay

In the Gulf of Fos, bivalves, gastropods, sea urchins and sponges may be harvested only in Carteau Bay, the northern boundary of which is defined as a line drawn from the lighthouse on the Saint-Louis seawall to the Pointe de la Gracieuse (zone No 13-06.01 of the Gulf of Fos catchment basin).

Only commercial fishers who hold an individual licence issued by the Departmental Director for Maritime Affairs are authorised to engage in the activity.

The activity shall be permitted from sunrise to noon.

The activity shall be permitted on the dates specified in separate prefectural orders opening the fishing seasons for shellfish, echinoderms, gastropods and tunicates (sea urchins, sea squirts, murices, oysters, scallops and mussels, etc.).

(2) Fishing for mussel spat

Fishing for juvenile mussels, known as spat, shall be permitted in the Gulf of Fos.

Fishing for mussel spat shall be subject to individual authorisation.

The only purpose for which mussel spat may be fished shall be to supply mussel farms and other breeding establishments where they shall be deposited to fatten for a maximum period of six months.

The activity shall be permitted throughout the year from sunrise to sunset.

Article 13: Fishing effort

The overall length of vessels shall not exceed ten metres.

The engine capacity of vessels shall not exceed 200 kilowatts.

Article 14: Target species and fish sizes

Fishing with shellfish dredges may target:

- shellfish: filter feeders and burrowing species
- echinoderms: sea urchins
- tunicates: sea squirts
- gastropods: murices and *Bolma rugosa*

The presence of marine organisms other than permissible shellfish may not exceed 10% of the total live weight of the catch retained on board.

Chapter 5 Monitoring and evaluation of dredge-fishing activity

Article 11: Catch declarations

Catch declarations must be made in respect of dredge fishing.

1.1.3. Article 12: Monitoring and evaluation

A system of monitoring shall be established for dredge fishing during the first year with a view to being able to set quotas if the need arises.

A system of scientific monitoring shall be established, focusing primarily on:

- sample checking of the fishing effort and the associated yields,
- analysis of catches and discards, and
- evaluation of snail stocks with a view to establishing whether it is appropriate to define a minimum size.

The information gathered through the data-collection framework in application of Council Regulation (EC) No 1543/2000 shall be used to make analyses relating to this management plan.

ANNEX: Temporary exemptions

By way of derogation from Article 5, the simultaneous use of two beam dredges shall be permitted outside the three-mile zone for vessels which are shown to predate 1 January 2007. This exemption is granted to the following three shipowner/vessel combinations:

Name of shipowner	Vessel	Registration No
Patrick Rizoulières	CHARLY CHRIST	ST 923 684
Jean-Marc Cartier	JULES ANDRE II	ST 315242
Vincent Caci Nathalie	VINCENT II	ST 926020

This exemption shall not be transferable.

By way of derogation from Article 5, the use of a vessel with a length of 12.7 metres shall be permitted in respect of one vessel which is shown to predate 1 January 2007. This exemption is granted to the following shipowner/vessel combination:

Name of shipowner	Vessel	Registration No
Jean-Noël Carrière	PRESQU'ÎLE	ST 315 085

This exemption shall not be transferable.

By way of derogation from Article 5, the use of an engine with a capacity exceeding 225 kilowatts shall be permitted in respect of all vessels which are shown to predate 1 January 2007. This exemption shall not be transferable.

In general terms, in the case of vessels exceeding ten metres in length for which the regulatory obligation to maintain the ship's logbook is fulfilled and in the case of smaller vessels in respect of which catch declarations are made, data relating to the fishing effort and catches are estimated on the basis of logbook entries and other documentary returns and are consolidated by the findings of an exhaustive annual survey of the activity of fishing vessels. Skippers and owners of fishing vessels with an overall length of less than ten metres, as well as operators engaged in fishing on foot, are required to complete record sheets and submit declarations. These declarations are forwarded to the Departmental Director of Maritime Affairs or to the head of the Maritime Affairs Service of the main fishing port no later than the fifth day of each calendar month.

This method is used in France on the Atlantic and Channel coasts, where markets are relatively well organised and where the declaration system is regarded as a sufficiently accurate reflection of the effort and catch data at the level of the segments defined in Appendix III to the Data Collection Regulation.

In the case of the Mediterranean coast, where the great majority of vessels are shorter than ten metres in overall length, a different situation obtains. While their activity is assessed by *métier* on the basis of monthly activity schedules collected by Ifremer, fishing statistics in terms of the numbers of trips made, the effort invested and the nature and volume of catches are not sufficiently ascertainable, particularly because of frequent instances of inactivity on the part of small units and the wide geographical dispersal of the small fleets and of landing locations.

In the recommendations made at the Kavala workshop of September 2005 on small-scale fisheries and at the Nantes workshops on the fleet-based approach, held in May 2005 and in March and May 2006, Member States were encouraged to incorporate into their national programmes studies designed to provide more accurate information and to conduct sample surveys of resources comprising fleets of vessels less than 12 metres in length. The analyses that were carried out at these workshops show that high-quality data is obtained by conducting more surveys of fishing operators, not only on quays but also on board fishing vessels.

France took steps to act on these recommendations by including in its programme for 2007 a pilot project for the estimation, by means of sampling, of levels of fishing effort and catches among those who practise small-scale *métiers* in the Mediterranean. This project covers the regions of Languedoc-Roussillon and Provence-Alpes-Côte d'Azur, where annual stocktaking reviews will be conducted. The unique feature of these regions is that they are home to small *métiers* which are practised at sea and in lagoons. The resulting study will also serve to provide a clearer picture of the fleets that primarily fish for eels, a species for which a recovery plan is to be put into operation in 2009.

The study protocol, based on J.F. Caddy and G.P. Bazigos, *Practical guidelines for statistical monitoring of fisheries in manpower-limited situations* (FAO, Rome, 1985), consists in:

- stratifying fleets on the basis of their activities, with generalised compiling of calendars showing the *métiers* practised by each named vessel,
- defining homogeneous geographical strata (clusters of landing locations) where sampling of the various fleets will be carried out,
- estimating, by means of telephone surveys or direct field surveys, the number of times each *métier* puts to sea,
- sampling fleets in terms of their fishing effort, the properties of the gear they use, the fishing areas they frequent and their production data in accordance with a stratified random-sampling plan.

The purpose of formulating a sampling plan is to specify the monthly number of field surveys for each stratum, to choose the number of observation days and the most appropriate time slots, to divide the survey days among the selected clusters of ports and to make a random allocation of survey days to each cluster. This task requires guaranteed statistical support in order to ensure that data are properly collected and that they are used to extrapolate findings for fleets and fleet segments as set out in the annex below.

The technicians' survey day in a given port is devoted to the observation of vessel movements (entries and exits), to surveys of the vessels' fishing effort and catch by species when they return from fishing trips and to a reconstruction of their recent schedule of fishing trips. Biological sampling of the main target species is also conducted. To this end, full-time or part-time researchers are engaged in the main landing locations within the regions under examination.

The planned allocation of human resources suggests that 410 survey days can be envisaged. These resources are chiefly provided by Ifremer, although some local part-time technicians are deployed in the remotest ports. The Mediterranean study in the Languedoc-Roussillon and Provence-Alps-Côte d'Azur regions will be conducted in cooperation with the Eclipse company, which will make available the equivalent of three full-time researchers. This should make it possible to provide for more than 500 field observation days during the year.

The care taken to adhere as closely as possible to the stratified random-sampling model in the formulation of the survey plan should serve to permit the use of sample-survey theory to calculate the estimators of fishing effort and of total production and production by species. This calculation will be made by port cluster and by fleet following a statistical validation of the methods used to extrapolate data in respect of fleet segments.

2. ANNEX – SAMPLING PLAN FOR OBSERVATION OF FISHING TRIPS

Observation of vessels docking after fishing trips will be effected in two stages during the first year:

- Stage 1: temporal monitoring of fishing activities, the diversity of *métiers* that are practised, fishing effort and landing locations;
- Stage 2: spatio-temporal sampling of landing locations and days at sea based on the observations made in Stage 1.

At the end of the first year of observing vessels returning from fishing trips, the first stage in which fleet activity was monitored will no longer be necessary because of the regular presence of observers on the ground and the continuous monitoring of fishing activities.

2.1. Stage 1: temporal monitoring of fishing activities

This first stage comprises three elements:

1. The annual calendar of vessels' fishing activities will be reconstructed with a view to establishing the *métiers* practised in the course of the year. The main purpose of monitoring fishing activity is to observe the activity of the commercial vessels entered in the register of the Community fishing fleet in the course of the reference year of the study, i.e. 2007. Since a census of the fishing activities of all vessels in the Community fleet register has already been conducted by means of Ifremer's Fisheries Information System, this project will be based on existing data.
2. The locations where vessels land their catches will be catalogued with a view to listing those where sampling will take place during the second stage of the project.
3. A survey of fishing effort will be conducted with a view to determining the fishing practices (frequency and timing of trips, etc.) and fishing effort (quantity of gear, average monthly number of fishing trips and their average duration, etc.).

2.2. Phase 2: categorisation and sampling plan

Cataloguing fishing activities in the area under examination serves to categorise the *métiers* that are practised in the area in order to group vessels into fleets and to determine, on the basis of a list of fishing ports, which port units should be included in the sample so that it covers the entire range of fishing activities. The sampling plan for vessels returning from fishing trips is stratified on the basis of the various *métiers* that are practised in the various landing locations. This analysis is carried out by the Directorate for Maritime Affairs of each *département* with a view to identifying the port units that are to be included in the sample and assessing the number of vessels belonging to each sampling unit.

Example of a distribution of vessel numbers by landing location for the Martigues area in 2006:

Sampling units	Number of vessels	%	Observation units	Number of vessels	%
SU1	19	11	Saintes-Maries-de-la-Mer, Port Cardian	19	11%
SU2	8	5	Cabanes de Beauduc	8	5%
SU3	35	21	Port-Saint-Louis-du-Rhône	28	17%
			Les Salins de Giraud	4	2%
			Port de Carteau	3	2%
SU4	31	18	Port-de-Bouc, Anse Aubran	28	17%
			Fos-sur-Mer, Port St-Gervais	3	2%
SU5	28	17	Etang de Berre, Saint-Chamas	14	8%
			Etang de Berre, Marignane	4	2%
			Etang de Berre, Istres - Les Heures Claires	2	1%
			Etang de Berre, Berre - Port de Passet	7	4%
			Etang de Berre, La Mède	1	1%
SU6	22	13	Martigues	22	13%
SU7	25	15	Carro	23	14%
			Anse des Laurons	2	1%
Total No of vessels	168				

The next step is to group the sampling units into a portfolio of vessels. The composition of these portfolios takes account of both the distance between observation points and the time at the observer's disposal. An observation portfolio must not comprise more than 200 vessels. The sampling plan is structured as follows:

Levels	Unit	Remarks
1	Portfolio of vessels to be observed	A portfolio of vessels is allocated to each observer.
2	Model sampling plan	Takes account of restrictions that apply to the relevant seaboard
3	Sampling unit	All observed entities
4	Main observation unit	Observation site corresponding to the landing points identified in the sampling plan.
5	Secondary observation unit	A secondary observation site is used in the event of no fishing activity being observable in respect of the main observation site (delays caused by bad weather, for example)

6	Landing points	Ports where the observer carries out sampling of vessels returning from fishing trips.
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The sampling plan is then implemented by each observer and hence in respect of each portfolio of vessels. Observation units are then selected at random for each sampling unit; the fact that restrictions apply serves to optimise the observation of vessels returning from fishing trips.

These restrictions are:

- The same observation unit cannot be selected twice in succession; this ensures better monitoring of the various sites since it enables observers to maintain a more regular presence at all the sample units.
- Each unit must be selected once every three weeks.
- Four days are reserved each week for field operations, which enables the observer to log the information he or she has collected about the sample fishing trips.
- Units are never selected for Sunday visits; this restriction has to do with the observers' working week and with the fact that coastal fleets are often noticeably less active on Sundays.

On the basis of random selection of observation units, a schedule of visits is drawn up for each portfolio of vessels and hence for each observer, indicating the observation units to be sampled each day.

Example of a schedule of visits for Observer No 1:

Observer	Year	Week	Day	Date	Sampling units	Observation units
1	2007	1	Wednesday	13 June 2007	Sea, 0-3 miles, St-Cyprien - Etang Capellans - Etang Canet – St-Nazaire	St-Cyprien
1	2007	1	Thursday	14 June 2007	Etang de Salse	Leucate (Port Leucate - Grau de Leucate)
1	2007	1	Friday	15 June 2007	Etang Bages-Sigean - Ayrolle - Campagnol - Gruissan - Grazel	Ports Etang de Bages-Sigean
1	2007	1	Saturday	16 June 2007	Sea, 0-3 miles, St-Cyprien - Etang Capellans - Etang Canet – St-Nazaire	Port-Vendres-Collioures-Argelès

2.3. Stage 3: observation of vessels returning from fishing trips

The observation of vessels returning from fishing trips comprises two measures:

- noting the presence of vessels at landing locations in order to establish which vessels have been inactive during particular fishing seasons and to identify the activity of absent vessels (the *métier* they are pursuing may be deduced from the absence of particular fishing gear from the quay, for example);

- observing the arrival of vessels engaged in all of the *métiers* practised from the site; on the one hand, the observer must reconstruct the details of the fishing trip (fishing effort, catch, unit cost of the trip, sampling for some of the main species found off the coast in question) and, on the other hand, he or she must reconstruct the calendar of fishing trips for the previous week or month.

2.4. **Organisation of field work**

In order to facilitate field work, each observer is responsible for a portfolio of sample units and observation units covering a cluster of observation sites, known as landing points. This clustering of landing points takes account of their geographical distribution, being divided between the sea on the one hand and ponds, estuaries and lagoons on the other, as well as of the diversity of fleet activities.

Restrictions imposed for the observation of vessels returning from fishing trips:

- alternation of timetables to cover the greatest possible number of *métiers* (time slots from 5 a.m. to 12 noon and from 2 p.m. to 9 p.m.); these time slots may vary according to season and diversity of *métiers*;
- a minimum of 12 days per annum for each landing-point unit, and a minimum of one monthly visit per site for the purpose of noting the presence and absence of vessels or even a fortnightly visit to facilitate the reconstruction of the calendar of fishing trips;
- weekly work cycle: surveys take place in accordance with the sampling plan during the period from Monday to Saturday inclusive, with one day per week devoted to the logging of collected data and four days devoted to the observation of landings.

8 **CURRENT REGULATIONS**

The general rules governing the practice and regulation of marine fishing apply to the Mediterranean. Foremost among these instruments are:

- Marine Fishing and Marine Cultures Framework Act No 97-1051 of 18 November 1997,
- Decree No 90-94 of 25 January 1990 adopted for the implementation of Article 3 of the Decree of 9 January 1852, as amended, establishing the general conditions for the practice of marine fishing in waters subject to Community conservation and management legislation,
- Decree No 90-95 of 25 January 1990 adopted for the implementation of Article 3 of the Decree of 9 January 1852, as amended, establishing the general conditions for the practice of marine fishing in fishing areas not covered by Community conservation and management legislation, and
- Decree of 9 January 1852 on the practice of marine fishing and its implementing instruments.

In addition, there are the following specifically regional provisions:

- Ministerial Order of 19 December 1994 enacting technical regulations for commercial fishing in the continental Mediterranean – Official Journal of the French Republic (OJ) of 26 January 1995 – NOR AGRM9492461A,
- Order No 99-162 of 10 June 1999 enacted by the Prefect of the Provence-Alps-Côte d’Azur region, laying down conditions for the practice of fishing in the waters of the continental Mediterranean, as amended, and

- Order No 2004-1077 and 1078 enacted by the Prefect of the Provence-Alps-Côte d'Azur region on compulsory consultation of the Regional Marine Fisheries Committee regarding the creation of a license to fish with a *gangui* net or small *gangui* net.

9 SPECIAL FISHING PERMITS

The management plans, the general aim of which is to guarantee the prevention of an increase in the fishing effort in the Mediterranean, provide for special fishing permits to be issued in accordance with Regulation (EC) No 1627/94.

A model ministerial order creating a special fishing permit for fishing in territorial waters in the Mediterranean, which can be adapted for each type of gear covered by a management plan, is set out in Annex 1.

Notwithstanding the provisions of Article 1(2) of Regulation (EC) No 1627/94, a special fishing permit may be required for vessels with an overall length of less than ten metres.

The relevant fishing permits shall be issued subject to fulfilment of the regulatory obligations concerning the exploitation of the resource in question, the recommendations contained in the management plan and previous catch declarations.

The criteria and conditions for issuing special fishing permits shall be adapted in accordance with resource-management requirements, particularly as regards the coefficient used for the suspension and transfer of the special fishing permits held by an owner/vessel combination in the event that one of its conditions is no longer being met. A limitation of the fishing effort in terms of days at sea may also be imposed.

Measures serving to implement effectively the management plans for the conservation of fishery resources in the Mediterranean may be taken in the second half of 2008, following validation of the recommendations submitted to the competent department of the European Commission.

ANNEX 1

Model ministerial order creating special fishing permits for specific categories of gear covered by a management plan

THE FRENCH REPUBLIC

Ministry of Agriculture and Fisheries

NOR : [...]

ORDER of []

creating a special fishing permit for fishing with ... in territorial waters in the Mediterranean

The Minister of Agriculture and Fisheries,

having regard to

Council Regulation (EC) No 1627/94 of 27 June 1994 laying down general provisions concerning special fishing permits,

Commission Regulation (EC) No 2943/95 of 20 December 1995 setting out detailed rules for applying Council Regulation (EC) No 1627/94 laying down general provisions concerning special fishing permits,

Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy,

Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 1626/94,

the Statutory Decree of 9 January 1852 on the practice of marine fishing, as amended,

Decree No 90-94 of 25 January 1990, adopted for the implementation of Article 3 of the Decree of 9 January 1852, as amended, establishing the general conditions for the

practice of marine fishing in waters subject to Community conservation and management legislation,

Decree No 93-33 of 8 January 1993, as amended, on the permit for the operation of fishing vessels, adopted for the implementation of Article 3(1) of the Decree of 9 January 1852 on the practice of marine fishing, as amended

Decree No 97-156 of 19 February 1997 organising the devolved Maritime Affairs Services,

Decree No 2004-374 of 29 April 2004 on the powers of prefects and the organisation and activity of government services in the regions and *départements*, and

the opinion of the National Marine Fisheries Committee (*Comité national des pêches maritimes et des élevages marins*) dated ...,

enacts the following Order:

Article 1 - Scope

1. In application of Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 1626/94, the practice of commercial marine fishing in territorial waters in the Mediterranean with the aid of fishing gear known as ... shall be subject to possession of a valid special fishing permit. This permit shall be entitled 'Special Fishing Permit for fishing with in territorial waters in the Mediterranean'.

2. The Special Fishing Permit for fishing with in territorial waters in the Mediterranean shall be compulsory for any producer using a vessel that flies the French flag, is registered in the European Community and holds a Community fishing licence relating to a commercial fishing activity.

3. It is prohibited for any French vessel to engage in commercial fishing in the area and with the fishing gear defined in the present Article unless it holds the special fishing permit referred to in paragraph 1 above.

4. Special fishing permits for fishing with ... in territorial waters in the Mediterranean shall not be transferable.

5. The list of producers and vessels holding a special fishing permit for fishing with ... in territorial waters in the Mediterranean shall be communicated to the European Commission by the minister responsible for marine fisheries in accordance with the procedures defined by current regulations.

Article 2 – Issuing authorities

Special fishing permits for fishing with ... in territorial waters in the Mediterranean shall be issued by the Regional Director for Maritime Affairs in accordance with the model set out in Annex 4.

Article 3 – Period of validity

1. The period of validity of a special fishing permit for fishing with ... in territorial waters in the Mediterranean shall not exceed one year.

2. The granting of a special fishing permit for fishing with ... in territorial waters in the Mediterranean shall be notified to the applicant producer and, where appropriate, to the producers' organisation to which the producer belongs.

Article 4 - Applications

1. All applications for a special fishing permit within the meaning of this Order must be made by the producer in respect of each of his or her vessels which are commissioned or due to be commissioned within a period not exceeding one year to the Departmental Director of Maritime Affairs in accordance with the model set out in Annex 5.

2. Any vessel for which no application for a special fishing permit for fishing with ... in territorial waters in the Mediterranean has been made before ... of the current year shall automatically lose its right to fish. The special fishing permit for fishing with ... in territorial waters in the Mediterranean may then be assigned to a new applicant.

Article 5 – Examination of applications

1. A special fishing permit for fishing with ... in territorial waters in the Mediterranean may be issued to any producer whose vessel features in the list of vessels authorised to engage in regulated activities in the said fisheries which has been compiled by the minister responsible for marine fisheries and which is known as the Fishing Rights List. That list is drawn up in the light of past catches and fishing effort made by the producer's vessel or vessels and with regard to the catch quotas and restrictions on fishing effort assigned to France by virtue of Community legislation.

2. The Fishing Rights List referred to in paragraph 1 above shall be compiled as follows:

- An initial list of producers and vessels eligible to be granted a special fishing permit for fishing with ... in territorial waters in the Mediterranean shall be drawn up by the minister responsible for marine fisheries; it shall comprise those vessels which, in the course of at least one of the ..., have landed more than ... tonnes resulting from the practice of commercial marine fishing in the area and with the fishing gear defined in Article 1 of this Order.

- *That initial list shall be updated by the minister responsible for marine fisheries.*

3. Any change in the information shown on the special fishing permit shall entail the renewal of the permit if the new characteristics of the vessel so warrant. It shall be the responsibility of the producer to make the application to the Directorate for Marine Fisheries and Aquaculture for the year 2006 and to the Departmental Directorate for Maritime Affairs at the port of registration of the vessel concerned for 2007 and subsequent years in accordance with the procedure described in Article 4 of this Order.

4. Every application for a special fishing permit for fishing with ... in territorial waters in the Mediterranean which is presented for a vessel that is not entered in the list referred to in paragraph 1 above must be accompanied by a request for the transfer of previous records pertaining to the vessel. Should the shipowners affected by this transfer be members of one or more producers' organisations, this request must be endorsed by the organisation or organisations concerned.

5. Valid applications submitted by a producer in respect of one or more vessels not entered in the list referred to in paragraph 1 above shall be forwarded to the Directorate for Marine Fisheries and Aquaculture. They shall be examined and classified in conformity with Decree No 90-94 of 25 January 1990, as amended, with due regard to the producers' past records, market trends and socio-economic equilibrium.

Within this framework, the minister responsible for marine fisheries may enter a vessel in the list of vessels to which a special fishing permit has been granted in respect of a type of gear covered by a management plan after consulting the Advisory Committee on Allocations established by Article 8 of the Order of 13 April 2006 establishing detailed procedures for the various fishery licensing schemes defined by Community legislation that are applicable to French vessels registered in the European Community.

Article 6 – Control and penalty provisions

1. The skipper of every commercial fishing vessel engaged in commercial marine fishing in the area and with the aid of the fishing gear defined in Article 1 of this Order must be able to present a special fishing permit issued in accordance with this Order whenever an inspection is conducted at sea or on landing.
2. A permit issued in implementation of this Order may be suspended for infringement of the laws and regulations in force, regardless of any criminal sanctions incurred, in the circumstances defined by Article 13 of the aforementioned Decree of 9 January 1852, as amended.

Article 7

The Director of Maritime Fisheries and Aquaculture and the prefects of the regions concerned shall be responsible, each within his or her own sphere of competence, for the implementation of this Order, which shall be published in the Official Journal of the French Republic.

DONE at Paris on []

Minister of Agriculture and Fisheries

ANNEX 2

Model application for a special fishing permit for certain fisheries in territorial waters in the Mediterranean

Council Regulation (EC) No 1967/2006 of 21 December 2006

concerning management measures for the sustainable exploitation of fishery resources

in the Mediterranean Sea, amending Regulation (EEC) No 2847/93

and repealing Regulation (EC) No 1626/94

Application for a special fishing permit for certain fisheries in territorial waters in the Mediterranean

To be sent to the Departmental Directorate for Maritime Affairs

I, the undersigned

Surname and forename:

**Shipowner
or shipowner's representative:**

Address:

request a special fishing licence for certain fisheries in territorial waters in the Mediterranean for the following vessel:

Name of vessel:

**External registration
number**

for the period from:

/ /

to:

/ /

and I undertake to:

- implement the measures prescribed by Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation

of fishery resources in the Mediterranean Sea and the management plans laying down the related requirements, and

- to comply with Community legislation relating to the administration of fishing quotas.

Signed at:	on:
Signature:	
Shipowner or shipowner's representative	

Endorsement by the producers' organisation responsible for the vessel to which this application relates:

I, the undersigned,, Chairman/Director ⁽¹⁾ of

.....,

hereby deliver a FAVOURABLE OPINION ☐ an UNFAVOURABLE OPINION ☐

Signed at: on:/...../.....

Signature:

If the applicant is not a member of a producers' organisation:

Endorsement by the Regional or Local Marine Fisheries Committees:

I, the undersigned,, Chairman/Director ⁽¹⁾ of

.....,

hereby deliver a FAVOURABLE OPINION ☐ an UNFAVOURABLE OPINION ☐

Signed at: on:/...../.....

Signature:

⁽¹⁾ Delete as appropriate

ANNEX 3

FLEET COVERED BY A MANAGEMENT PLAN **Council Regulation (EC) No 1967/2006 of 21 December 2006**

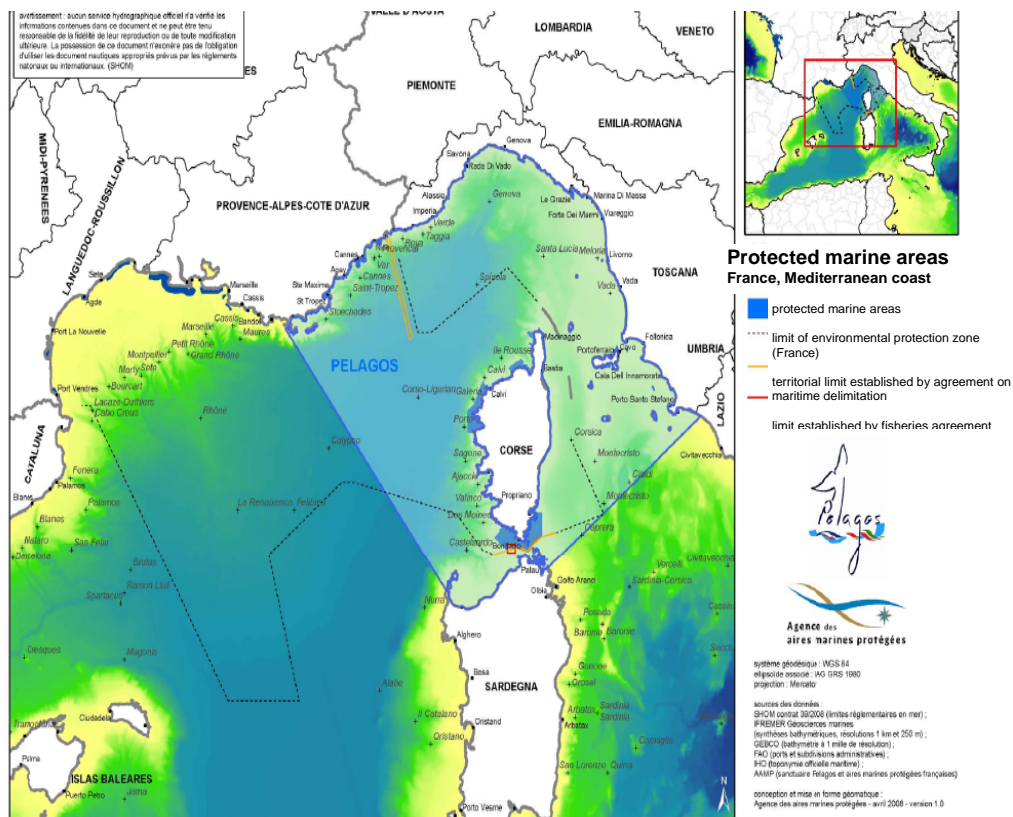
Number of vessels identified: 325

TRAWLING		DREDGE FISHING	
Number of vessels	118	Number of vessels	74
Target species:		Target species	sea snails
Pelagic species	sardines – anchovies		sea urchins - oysters
Bottom trawling	monkfish – sole		
Areas		Areas	
Ajaccio	3	Martigues	18
Bastia	6	Sète	33
Marseille	8	Port-Vendres	23
Martigues	18		
Sète	64	Vessel length	
Port-Vendres	19	Less than 10 metres	58
		10 to 18 metres	16
Vessel length		Tonnage	
12 to 24 metres	56	Less than 13 GT	73
24 to 26 metres	62	80 GT (dredge plus seiner) 1	
Tonnage			
Less than 50 GT	31		
50 to 99 GT	47		
100 to 175 GT	40		

GANGUI		SEINES (<i>allatchare, lampara and seine nets</i>)	
Number of vessels	68	Number of vessels	94
No target species		Target species:	
		lampara	sardines – anchovies
Areas		allatchare	sea bream – sea bass
Marseille	6	seine	bluefin tuna
Nice	17		
Toulon	45	Areas	
		Ajaccio	1
Vessel length		Marseille	2
4 to 10 metres	56	Nice	29
10 to 12 metres	12	Port-Vendres	28
		Sète	34
Tonnage		Vessel length	
Less than 10 GT	68	Less than 10 metres	38
		10 to 24 metres	27
		24 to 45 metres	29
		Tonnage	
		Less than 50 GT	62
		50 to 99 GT	5
		100 to 175 GT	27

ANNEX 4

Protected marine areas



ANNEX 5
TECHNICAL SPECIFICATIONS
Fishing gear

Summary information sheet: ***Ganguis***

Local names: *Gangui flanelle*, *G. à perche*, *G. à ferrures*, *G. à violets*, *G. à poissons*, *petits ganguis*, *ganguillons*.

Technical description	<i>Ganguis</i> are a 'family' of towed nets of the trawl type and are used exclusively by exponents of small-scale <i>métiers</i> in the Provence-Alps-Côte d'Azur region. These small-sized types of fishing gear have been adapted for use in areas where traditional forms of fishing are practised, particularly on seagrass beds, where they target the various species of fish that constitute the mixture sold as <i>soupe de roche</i> and the species that form the main ingredients of <i>bouillabaisse</i> .
Brief categorisation	<p>Categorisation is a fairly complex task in view of the large number of local names that are specific to each subcategory of the <i>gangui</i>. These terminological differences have caused a degree of confusion which is reflected in some technical documents. A simplified classification of the main kinds of gear is presented below:</p> <p>1. <i>Ganguis with a rigid frame</i> (mouth of net held open laterally by a rigid steel frame):</p> <p>1.1 Small <i>ganguis</i>: frame 1.5 to 2.5 metres wide, seasonal use (Nov. to March) on grassbeds, targets <i>soupe de roche</i> – an assortment of small rock-dwelling fish – or sea urchins or shrimps, depending on fishing areas and the mesh size of the net.</p> <p>1.2 <i>Ganguis</i> with runners, which have a frame width of four to five metres, fish throughout the year on seagrass beds and target the same species as hard-bottomed <i>ganguis</i>.</p> <p>2. <i>Ganguis with otter boards</i> (mouth of net held open by otter boards)</p> <p>2.1 Hard-bottomed <i>ganguis</i>: otter boards are generally made of wood with steel reinforcement and weigh 50 to 60 kg; these <i>ganguis</i> are used on seagrass beds throughout the year at depths of 12 to 30 metres.</p> <p>2.2 Sea-squirt <i>ganguis</i>: otter boards are generally made of wood with a steel frame and weigh 50 to 60 kg; these <i>ganguis</i> are reportedly used off headlands on rough parts of the seabed at depths of 40 to 70 metres; they are used from September to April.</p> <p>2.3 Soft-bottomed <i>ganguis</i>: the otter boards are made of steel and weigh about 90 kg; these <i>ganguis</i> fish all the year round, generally in deeper waters than those where seagrasses grow.</p> <p>Note 1: Hard-bottomed <i>ganguis</i> can have a device known as a <i>daï</i> mounted in line with the middle part of the grassrope. This device serves to flatten the green leaves of the <i>Posidonia</i> and thus avoids excessive harvesting of dead leaves. It generally takes the form of a kind of metal roller one metre long and 70 millimetres in diameter.</p>

Fishing areas and depths	<p>Under the rules enacted by the <i>prud'homie</i> and Prefectoral Order No 99-162 of 10 June 1999, fishing with a <i>gangui</i> is prohibited in waters less than 12 metres deep. The main fishing grounds for the Var fleets are the Hyère Roads, the Gulf of Gien and small areas off the island of Porquerolles.</p> <p>Depending on the type of gear and the target species, the fishing effort of <i>ganguis</i> is spread across an offshore strip where the water depth increases from 12 to 100 metres:</p> <ul style="list-style-type: none"> • small <i>ganguis</i> operate at depths of 12 to 20 metres; • <i>ganguis</i> with runners and hard-bottomed <i>ganguis</i> operate at depths of 12 to 30 metres; • soft-bottomed <i>ganguis</i> operate at depths of 28 to 100 metres and on very rare occasions in even deeper waters.
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Catches

Target species	<p><i>Ganguis</i> make multispecies catches, comprising a wide variety of fish as well as molluscs and crustaceans – a full list was compiled as part of the IDEE 2001 study. Within the fishing industry, these species are classified on the basis of their gastronomic use, their family or their commercial value: <i>soupe de roche</i>, fish used in <i>bouillabaisse</i> or ingredients for the industrial production of fish soup.</p> <p>The main families of fish species caught by <i>ganguis</i> are:</p> <p><i>Atherinidae, Blennidae, Carangidae, Centranchidae, Clupeidae, Gobiidae, Labridae, Mullidae, Pomacentridae, Serranidae, Scorpenidae, Syngnatidae, Sparidae, Triglidae, Trachinidae</i> and <i>Zeidae</i>.</p> <p>Specific forms of <i>gangui</i> – shrimp, sea-urchin or sea-squirt <i>ganguis</i> – target the species for which they are designed.</p>
Observed by-catches	<p>Fish: sea bass, sea bream and sargo bream</p> <p>Cephalopods: cuttlefish and squid</p> <p>Crustaceans: crayfish (2004 and 2007) and hermit crabs</p>
Discards	<p>A very limited number of discards were observed in the course of hauls, and these were thrown back into the water alive. They mainly comprise echinoderms (sea cucumbers and starfish), small crustaceans and some molluscs.</p> <p>Some undersized fish, chiefly <i>Scorpenidae</i> and <i>Congridae</i> are thrown back into the water alive.</p>

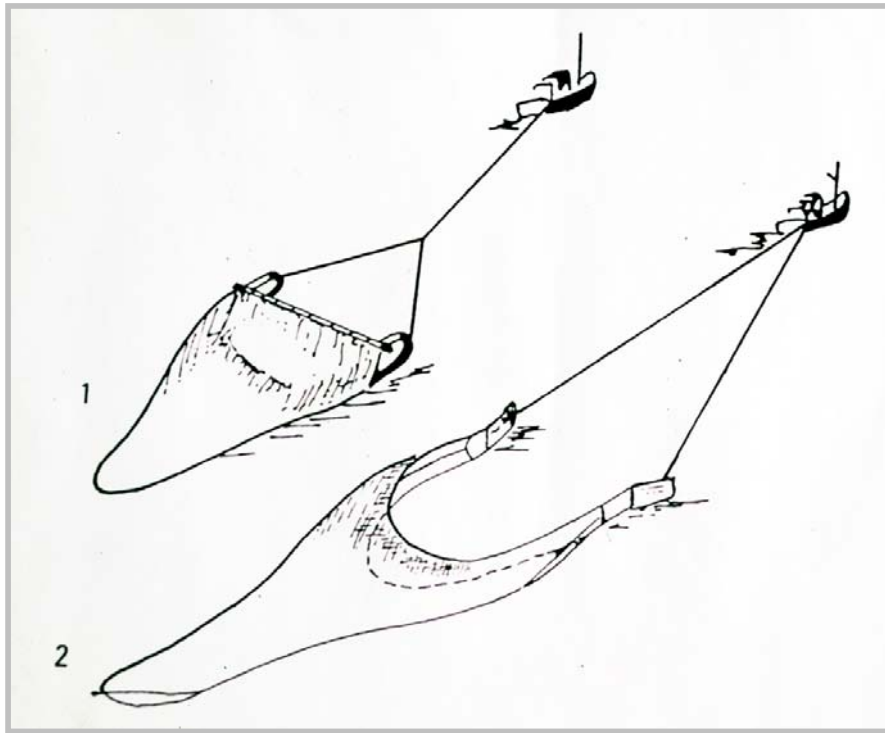
Diagnosis and proposals

Strengths	<p>Traditional fishery in the Provence-Alps-Côte d'Azur region in which a balance has recently been established (1998-2000) between resources and fleet size.</p> <p>Pursuit of a campaign to enhance the value of the commercial-fishing methods used in the <i>département</i> of Var and production of a guide to good practice in the use of local commercial-fishing methods in Var:</p> <ul style="list-style-type: none"> ▪ fishing season limited to 200 days a year; ▪ minimum of 20 mm mesh size stretched in cod-ends; ▪ establishment of a monitoring system in the form of catch records; ▪ ban on fishing at depths of less than 12 metres (Prefectoral Order No 99-162); ▪ recovery of snagged nets by means of a grab or a <i>banier</i> (a float attached to the cod-end) or with the aid of divers. <p>The target species are intended for a very specific local market.</p> <p>Catch volumes are adapted and regulated by the fishermen themselves in order to prevent any fall in selling prices (agreements between fishermen and wholesalers).</p> <p>The gear is highly selective. Given the goodwill of the skipper and his crew, all undersized catches are returned to the water alive.</p> <p>Discards are limited to echinoderms (starfish, brittle stars and sea cucumbers) and crustaceans (shrimps and hermit crabs). The bulk of these organisms are thrown back into the sea alive.</p>	
Weaknesses	<p>Form of trawling within the three-mile zone on seagrass meadows (beds of <i>Posidonia oceanica</i>)</p> <p>The proportion of immature individuals varies between 27% and 41% of catches.</p>	<p>Conduct studies with the industry and make technical proposals for impact reduction (shape and weight of otter boards, reduction in the number of juveniles being caught)</p>
Critical factors	<p>Number and power of engines of vessels engaged in soft-bottomed <i>gangui</i> fishing</p> <p>Use of steel otter boards in seagrass areas</p> <p>Number, distribution, characteristics and activity of small <i>ganguis</i></p>	<p>Impose clear limits on the number of units allowed to practise fishing with soft-bottomed <i>ganguis</i>.</p> <p>Gradually eliminate the use of steel otter boards in seagrass areas</p> <p>Conduct a specific study on the activity of small <i>ganguis</i> and define clearly the characteristics of that form of fishing gear and the applicable regulatory framework.</p>
Proposed scientific monitoring	<ul style="list-style-type: none"> • Support for the monitoring measures taken by the Local Marine Fisheries Committee with regard to the fleet, catches and fishing effort (roles of the various stakeholders) • Trials of 40-mm-square mesh in cod-ends • Support for the initiation of a campaign to enhance the value of fishery products 	

Technical plan of the gear in Appendix 1 below

Technical appendices

Appendix 1: Plan of a *gangui* with a rigid frame (1) and with otter boards (2) in fishing mode



Plan of *gangui* with otter boards: J. Sacchi, RH-Ifremer, Sète, 28 August 2007

BOTTOM TRAWL

Gangui with otter boards

Sea squirts, fish

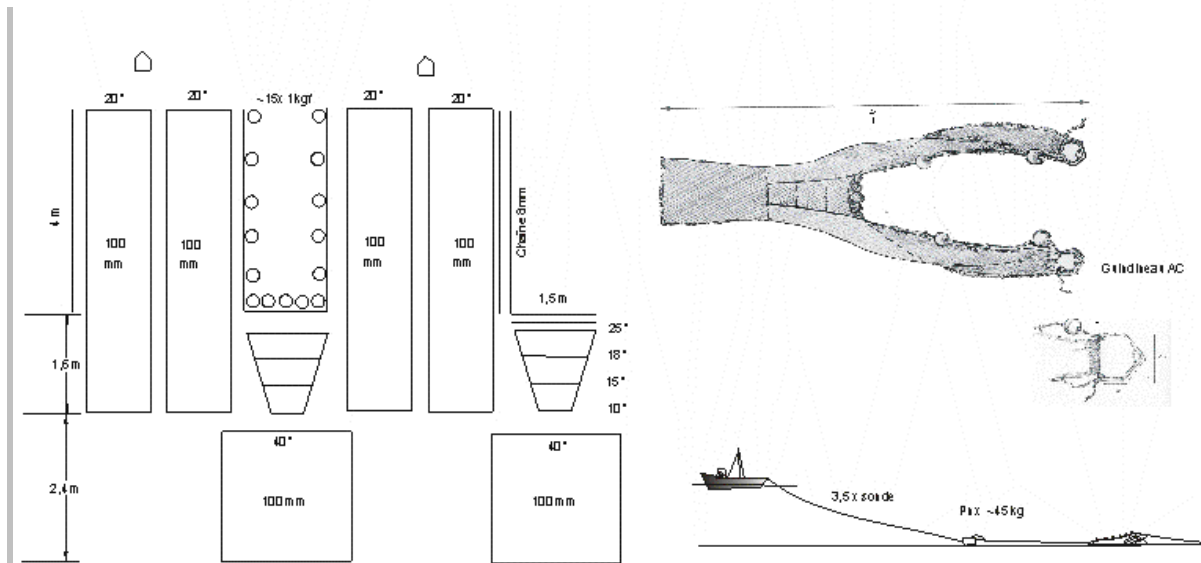
Mediterranean, Provence coast

NAU 16

LHT 10 à 12 m

MM 40 à 80

TNX 6 à 8



Summary information sheet: **Beach seine**

Local names: Languedoc-Roussillon: *caluche, traîne en plage, claire, seiche, sègue, bouillé*
 Provence-Alps-Côte d'Azur: *eissaugue, berguin, bourguin, tartanon*

Technical description	<p>FAO definition of the beach seine (Nédélec, 1990):</p> <p>'These nets are usually set from a boat. They can be operated either from the shore (beach seines) or from the boat itself (e.g. Danish or Scottish seines).</p> <p>The manner of capture is to surround an area of water with a very long net, with or without a bag at the centre. The net is usually operated by two ropes fixed to its ends, used both for hauling it in and for herding the fish'.</p> <p>This category comprises seine nets hauled across the ground, which are generally used in shallow waters near the shore. The seabed and the surface act as natural barriers to prevent fish from escaping from the space enclosed by the net.</p> <p>A distinction is made between beach seines with a bag and those without a bag; the latter, however, contain a central part with smaller and slacker mesh in which the fish is caught.</p>
Categorisation	<p>Four different types of beach seine are used off the French Mediterranean coast. Two are specific to the region of Languedoc-Roussillon, and two others are used exclusively in the Provence-Alps-Côte d'Azur region. They target different species, and their dimensions and mesh sizes therefore differ accordingly.</p> <p><u>In Languedoc-Roussillon:</u></p> <p>(i) Seines known as claires are used to catch whitefish (grey mullet, sea bass and sea bream); the mesh size of their bag is 36 millimetres.</p> <p>(ii) Seiches ('cuttlefish seines') have a bag with a mesh size of 24 millimetres so as to avoid netting small pelagic specimens, which can be removed alive from the net bag.</p> <p><u>In Provence-Alps-Côte d'Azur:</u></p> <p>(iii) Seines known as eissauges are characterised by a two-millimetre mesh size in the bag to catch <i>poutine</i> (small pelagic fish at a larval stage of development)</p> <p>(iv) Bourgin nets are very similar to eissaugues and are used to fish for <i>friture</i> (juveniles of small pelagic fish; their bag has a mesh size of five millimetres.</p>

Fishery and strategy

Number of units and geographical distribution	<p><u>In Languedoc-Roussillon</u>, the distribution of beach seines remains rather vague in spite of the census carried out at the request of the <i>Prud'homie</i> of Gruissan in May 2007 as part of the process of drafting the management plan for that type of gear.</p> <p><u>In Provence-Alps-Côte d'Azur</u>, 28 units were identified in the IDEE study of 2002: one in Marseilles, one in Cannes, nine in Cros de Cagne, four in Nice, two in Villefranche, four in Antibes and seven in Menton.</p>
Strategy	<p>Fishing activity depends on the season and weather conditions. The locations where beach seine fishing can take place are known locally, and each fishing community has its own specific names for each of these locations.</p> <p>Setting and hauling practices remain traditional and have not changed since the return to manual traction. No prospecting or navigating equipment is used. Fishing operations depend entirely on the know-how (handling of currents) and experience (choice of location) of the head of the seining team.</p>

Bathymetric zones	<p><u>In Languedoc-Roussillon</u>: a coastal strip extending one nautical mile (about 1 800 metres) from the shoreline</p> <p><u>In Provence-Alps-Côte d'Azur</u>: a very inshore strip extending to 400 metres from the beach</p>
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Catches

Target species	<p><u>In Languedoc-Roussillon</u>: sea bream, sea bass, striped sea bream, mullets (main target species in 1980), sardines and mackerel</p> <p><u>In Provence-Alps-Côte d'Azur</u>: <i>poutine</i> (newly spawned sardines and various small non-pigmented pelagic fish) and <i>friture</i> (juvenile blue sardines and lightly pigmented small pelagic fish)</p>
By-catches	<p><u>In Languedoc-Roussillon</u>: scad, garfish, sardinellas (round sardinellas) red mullet and cuttlefish</p> <p><u>In Provence-Alps-Côte d'Azur</u>: no information available</p>
Discards	<p><u>In Languedoc-Roussillon</u>: the mesh size of the <i>seiche</i> nets enable crews to throw back most of the by-catch of small pelagic specimens alive, particularly in the case of large hauls.</p> <p><u>In Provence-Alps-Côte d'Azur</u>: no information available</p>
Environmental impact	<p><u>In Languedoc-Roussillon</u>: apparently very little or no impact, because fishermen operate on relatively 'clean' parts of the seabed away from the seagrass areas; the grassrope or leaded rope do not weigh heavily on the seabed.</p> <p><u>In Provence-Alps-Côte d'Azur</u>: apparently very little or no impact, according to the findings of the IDEE study of 2002.</p>

Diagnosis and proposals

Strengths	<ul style="list-style-type: none"> • Seems to offer a relatively high degree of selectivity, with very few discards • Very high-quality fish – still alive when caught • The net is never lost because snagging is rare, and the net can always be released by a diver • Fishing areas are very limited, because of the need to confine operations to clean parts of the seabed • The fishing period is limited by weather conditions and seasons 	
Weaknesses	Poor specific selectivity	<p>Trials with bags made of square mesh</p> <p>Trials of escape windows for small pelagic species in <i>claire</i>-type seine nets</p>
Critical factors	<p>Number of seines in operation</p> <p>Dimensions of seines</p> <p>Mesh size of net bags</p> <p>Form of traction</p> <p>Fishing areas</p> <p>Number of sets (<i>bois</i>)</p>	<p>Periodic monitoring of beach seine fishery</p> <p>Proposal for scientific monitoring</p> <p>Monitoring of catches</p> <p>Monitoring of fishing effort</p>

Technical plan of the gear in Appendix 1 below

Fig.4.- Senne de plage ,type "Sègue" ®

Summary information sheet: **Dredge**

Local name: *barre* (formerly *radasse*)

Technical description	<p>FAO definition of dredges (Nédélec, 1990):</p> <p>‘Dredges are employed usually to collect shellfish and molluscs such as mussels, oysters, scallops, clams, etc. The catch is held in a sort of bag or sieve which allows water, sand and mud to run out.’</p> <p>These dredges vary in size and weight but are generally quite heavy and may or may not be fitted with depressor plates.</p>
Categorisation	<p>In Languedoc-Roussillon, dredges can be divided into two categories:</p> <ul style="list-style-type: none"> the beam dredge (<i>barre</i>): used exclusively at sea to fish for sea snails (the purple dye murex <i>Bolinus brandaris</i>); the net is held open horizontally by a four-metre-long metal beam weighing a maximum of 90 kilograms (beam plus bridle) to which is fastened a net in the form of a trawl with a stretched mesh size of 80 millimetres in the wings and 60 mm at the cod-end pond dredge: used to fish for non-burrowing shellfish (oysters and mussels)

Fishery and strategy

Number of units and geographical distribution	<p>According to the findings of a survey conducted in 1997-98, the <i>radasse</i> was used by 2% of the exponents of small-scale <i>métiers</i> in the Gulf of Lion (Guillou, 1999).</p> <p>In 2007, beam dredges were used in the Languedoc-Roussillon region, mainly on vessels operating from the port of Sète, where six vessels worked with a beam dredge throughout the year but remained multi-gear craft, and from the port of Le Grau du Roi, where five units are regularly equipped with a beam dredge.</p> <p>At St-Cyprien, where this technique was used at least until the year 2000, it seems to have been gradually abandoned under pressure from the administration and in the wake of territorial conflicts with trawlers.</p> <p>Data from the Regional Directorate for Maritime Affairs (June 2006): 22 beam dredges and 6 pond dredges</p> <ul style="list-style-type: none"> Beam dredges: one in Valras, one in Agde, eight in Sète, two in Frontignan and eight in Le Grau du Roi Pond dredges: five in Mèze and one in Marseillan
Strategy	<p>The potential fishing area for the units based in Sète extends from Cap d'Agde to the Pointe de l'Espiguette, excluding the area where octopus pots are submerged and the waters that are overseen by the <i>prud'homies</i> of Frontignan and Agde. The fleet operating out of Sète is normally confined to a relatively restricted area because of the risk of snagged nets, the rocky areas and the prohibitions imposed by the <i>prud'homies</i> in the area bounded by the breakwater, the offshore mussel ropes and the Frontignan area. The choice of fishing area is determined by the season, the currents and the results of previous fishing trips.</p> <p>By-catches, limited by Regulation (EC) No 1967/2006 to 10% of the total live weight of the catch, seem to represent an important supplement for these units. The strategies they adopt therefore enable them to target fish or, depending on the season, cuttlefish or hermit crabs.</p> <p>Some units have specialised in this fishery and pursue it all the year round (about 200 days a year) between 3 a.m. and 3 p.m. (10 to 12 hours a day in 2007). The average duration of a dredge tow is 75 minutes. A unit can therefore carry out an average of six to eight tows per day.</p>

Bathymetric zones	<p>The great majority of beam dredges are used to fish in an offshore strip between one and three miles from the coast at depths of between 9 and 30 metres on beds of sandy silt or shell sand.</p> <p>Three units based in Sète have permits that allow them to fish with two beam dredges. They apparently fish more than three nautical miles from shore.</p>
Fishing effort - available data	<p>The only reference document on dredging for sea snails is the study produced by Bartolome in 1985.</p> <p>Data on sea-snail catches are held by the various fish markets.</p> <p>The species list in the paper by Campillo (1992) presents some information in summary form.</p>
Environmental impact	<p>The primary importance of the environmental impact seems to relate to the quantity of the shellfish and benthic organisms that are swept along with each tow. This impact does seem, however, to be limited geographically to particular areas where the use of beam dredges is possible.</p>

Catches

Target species	Sea snails (<i>Bolinus brandaris</i>), hermit crabs (<i>Pagurus spp.</i>)
Observed by-catches	<p>Fish: sole (<i>Solea vulgaris</i>), gurnard, skate, hake (<i>Merluccius merluccius</i>),</p> <p>Molluscs: scallops (<i>Pecten jacobaeus</i>), banded dye murex (<i>Murex trunculus</i>), cockles ?, cuttlefish (<i>Sepia officinalis</i>), octopus (<i>Octopus vulgaris</i>)</p> <p>Crustaceans: mantis shrimps (<i>Squilla mantis</i>), hermit crabs (<i>Pagurus spp.</i>)</p> <p>Miscellaneous: Sea squirts (<i>Microcosmus vulgaris</i>)</p> <p>According to observations made in 2001 and 2007, it would seem that the percentage of by-catch varies significantly from one fishing ground to another</p>
Discards	<p>A great number of small decapod crustaceans and some small flatfish (sole)</p> <p>Echinoderms: various species of sea cucumber, starfish and brittle stars</p> <p>Molluscs (two or three species) and annelids – <i>Aphrodita aculeata</i> (sea mice)</p>
Marketing	<p>Individual specimens are sorted into three categories – medium, medium-large and large. Some fishermen maintain very regular checks on the freshness of the catches 'by smell' so as to ensure that no dead specimens are boxed. Most of the supplies are destined for the Spanish market.</p> <p>The operators of beam dredges are suffering from the effects of competition from trawlers that fish close to the three-mile zone and supply the fish markets with sea snails. The dredge operators therefore prefer to do business with wholesalers.</p> <p>The hermit crabs are sold by the dozen to shops specialising in angling equipment as bait for sea-bream fishing. These crustaceans appear to be more abundant in some areas close to rocks. During the sea trip on 12 July 2007, more than 720 specimens were caught. Dredge operators may focus more sharply on this particular species in order to satisfy the demand from fishing-tackle shops.</p>

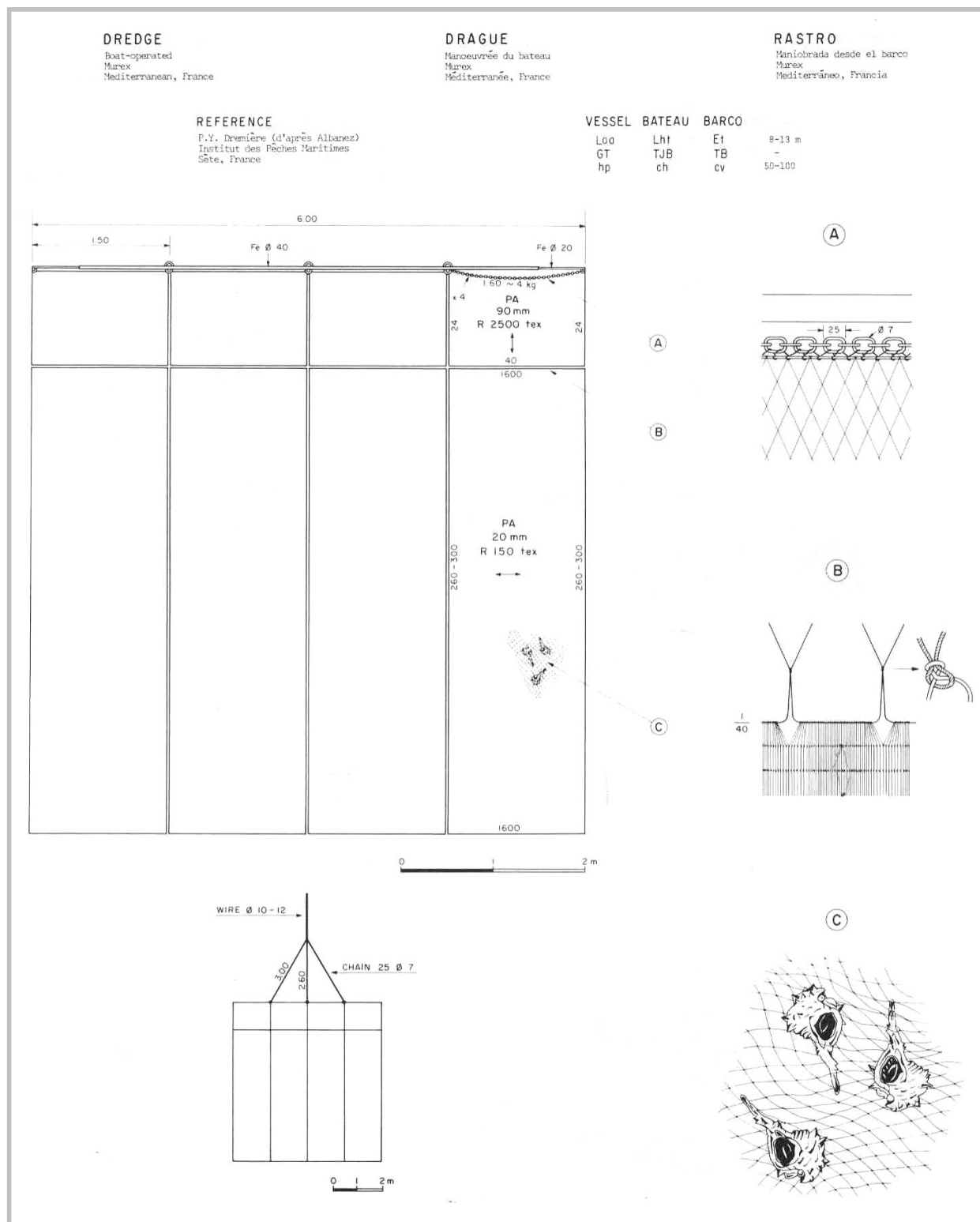
Diagnosis and proposals

Strengths	<p>This technique is relatively efficient in relation to the input of manpower and resources. The regular hourly output makes it possible to negotiate selling prices with distributors and wholesalers.</p> <p>Operators do not seem to be very dependent on the price of diesel, but this needs to be verified.</p> <p>Biological rest periods at weekends and on public holidays.</p>
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Weaknesses	<p>Mediocre selectivity</p> <p>Impact on the seabed</p> <p>Overlapping interests in areas where octopus pots are submerged are a fairly significant source of conflict</p>	<p>Limit the weight of the beam dredge</p> <p>Define the areas where it can be used</p> <p>Define fishing periods or arrive at a <i>modus vivendi</i> (e.g. transit corridors for beam dredge vessels)</p>
Critical factors	<p>Size and weight of the beam dredges plus the full rigging</p> <p>The two chains – ‘tickler chains’ – between the wings of the net tend to dislodge sea squirts</p> <p>Some fishermen do not throw small specimens back into the water</p> <p>The proportion of by-catches would appear to be greater than 10%</p>	<p>Formulate a definition of the rigging and the beam dredge in cooperation with the fishing industry</p> <p>Eliminate the tickler chains to make the gear more selective</p> <p>Establish a minimum catch size in cooperation with the fishing industry</p> <p>Establish a set of procedural guidelines for monitoring catches and by-catches</p>
Proposal for scientific monitoring	<ul style="list-style-type: none"> • Monitoring of the fleet • Monitoring of the fishing effort and the associated yields • Monitoring of catches: sea snails and by-catches • Evaluation of sea-snail stocks with a view to assessing the expedience of defining a minimum size • Technical environmental impact-assessment studies • Trials of alternative fishing gear, such as lobster pots and hermit-crab creels (<i>piadiers</i>) 	

Technical appendices

Appendix 1: technical plan of the beam dredge or *radasse* (FAO, 1975)



Summary information sheet: Coastal purse seines

Local names: *Allatchare*, *Tchiare*

Technical description	<p>FAO definition of surrounding nets (Nédélec, 1990):</p> <p>'These nets catch fish by surrounding them both from the sides and from underneath, thus preventing them from escaping in deep waters by diving downwards. Apart from a few exceptions, they are surface nets in which the floatline is supported by numerous floats.</p> <p>Purse-seines, which are a type of surrounding net, are characterized by the use of a purse line at the bottom of the net. The purse line enables the net to be close like a purse, and thus retain all the fish caught'.</p>
Categorisation	<p>The purse seines used today by the fishermen of the French Mediterranean coast can be divided into three categories:</p> <ul style="list-style-type: none"> • purse seines targeting larger pelagic species (tuna seines), • <i>lampara</i> purse seines targeting small pelagic fish, such as sardines and anchovies • <i>allatchare</i> coastal purse seines targeting whitefish species <p>There is no particular subdivision of the <i>allatchare</i>. The expanses of netting used for this gear can have different mesh sizes to enable skippers to respond to various requirements and/or opportunities.</p> <p>The <i>allatchare</i> is a small purse seine with a length of some 300 metres and a drop of 50 to 70 metres stretched. The ratio of drop to length is 1:5 or 1:6. The mesh size of the net is 60 or 70 millimetres stretched and 24 or 36 mm stretched in the bag, depending on the seines. The technical structure of the net is very similar to that of the sardine seines that were previously used by the same 'family' of fishermen. It has been adapted for use in shallow waters near the coast.</p> <p>Some units have two types of <i>allatchare</i> which they use for different target species and which therefore have different mesh sizes and dimensions, namely a seine for small pelagic species and a seine for whitefish.</p>

Fishery and strategy

Strategy	<p>The use of this gear requires very precise knowledge of the fishing grounds and of the behaviour of the various target species. Each skipper has his special 'spots', almost 90% of which are concentrated into a strip extending only one nautical mile from the shoreline all along the coast. The skipper frequents these spots, which cover very small areas, where fish tend to gather – the engine of a sunken wreck, a rock, a deep cavity, an artificial reef, etc.</p> <p>Numerous factors influence the presence or absence of fish: the season, the phase of the moon, meteorology (the wind direction), water temperature, currents, etc. Above all else, skippers must be able to use their experience to consider all these factors so as to focus their efforts on one specific area. They can also spend a whole day looking for fish and perhaps draw a blank or travel almost 100 nautical miles before attempting to set their nets.</p> <p>One of the most important strategic skills is undoubtedly the ability to 'read' and 'decipher' the information detected by the sounder and the shapes and colours it displays in order to distinguish the various species of fish and thus decide whether it is worth setting the nets.</p> <p>Manoeuvring a purse seine is also relatively complex because of the need to take account of the current and sometimes of shifts in the location of fish shoals.</p>
Bathymetric zones	<p>These units mainly operate within a coastal strip one to two miles wide at depths between 4 and 20 metres.</p> <p>They normally operate on a sandy or shell-sand seabed, although nets are sometimes set, apparently, in areas with seagrass beds.</p>
Environmental impact	<p>There would seem to be little or no environmental impact, because the nets are generally worked on relatively 'clean' parts of the seabed. The purse line and part of the net</p>

	certainly brush against the seabed, but in order to avoid snagging they must not drag across the bottom.
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Catches

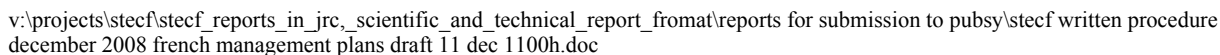
Target species	<ul style="list-style-type: none"> • Sea bream (<i>Sparus aurata</i>), sea bass (<i>Dicentrarchus labrax</i>) and striped sea bream (<i>Lithognathus mormyrus</i>) • Mullet in winter • Sardines and white anchovies (rarely)
Observed by-catches	<p>Porgies (<i>Pagellus acarne</i>, <i>Pagellus erythrinus</i>), bogues (<i>Boops boops</i>), sargo breams (<i>Diplodus anularis</i>, <i>Diplodus vulgaris</i>, <i>Diplodus sargus sargus</i>), triggerfish, round sardinellas, scads, barracudas, sea horses and red mullets</p> <p>Cuttlefish (<i>Sepia officinalis</i>), squids (<i>Loligo vulgaris</i>), and sea snails (<i>Bolinus brandaris</i>)</p>
Discards	<p>Quantities variable, depending on the volume of by-catch; mainly comprise fish with little commercial value, such as sardines, scads and bogues.</p> <p>Most discards are still alive if the sorting is done quickly and/or the catch is of limited size.</p>

Diagnosis and proposals

Strengths	<ul style="list-style-type: none"> • Highly selective • Catches composed entirely of 'extra quality' fish • <i>Métier</i> requires technical skills and is therefore the preserve of a few experienced fishermen, which limits the number of units • Relatively low dependence on the price of diesel, although consumption varies with the need to go looking for fish 	
Weaknesses	Selectivity and the quality-assurance process are directly linked to the skills of the skipper and the goodwill of the crew.	Consult with skippers of units and identify ways of improving the selectivity of high-quality <i>allatchare</i> fishing, for example by compiling a manual of good practice
Critical factors	<p>Maximum length and drop need to be defined</p> <p>Mesh size of the net and bag need to be defined</p> <p>Fishing in unauthorised areas (seagrass beds, cf. Regulation (EC) No 1967/2006)</p>	<p>Define maximum gear dimensions</p> <p>Define authorised mesh sizes</p> <p>Define 'no-take zones'</p>
Possible selectivity improvements	<ul style="list-style-type: none"> • Regulation of fishing on seagrass beds in order to avoid the catching of seahorses • Regulation of bag mesh size to make it easier for small pelagic specimens to escape 	<ul style="list-style-type: none"> • Consult with the fishing industry and define the areas of seagrass meadow where fishing is prohibited • Consult with the fishing industry, establish selectivity guidelines and finalise selectivity trials

<p>Proposal for scientific monitoring</p>	<ul style="list-style-type: none"> • Monitoring of the fleet: framework survey on number of units, distribution of the fleet, periods of activity, etc., along the entire French Mediterranean coast • Monitoring the fishing effort (catch declarations or monitoring of units and fish-market data) • Incorporation of this method into the monitoring programme on discards • Feasibility studies on: (i) practical retraining courses for the adoption of this method, and (ii) raising the regional profile of purse-seine catches and creating a labelling system.
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Appendix 1: Technical plan of the *allatchare* purse seine. Source: P.Y. Dremière, *Catalogue des engins de pêche artisanale*, FAO, 1975, pp. 42-43



European Commission

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Abstract

The Scientific, Technical and Economic Committee for Fisheries gave its opinion by written procedure in December 2008 on a request by the European Commission to evaluate the "Management Plans for certain fisheries in the Mediterranean Sea", submitted by the French Authorities.

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